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Agriculture, forestry and fishery statistics

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Abstract

This *Agriculture, forestry and fishery statistics* pocketbook provides a selection of topical data. Information is presented for the European Union (EU) and its Member States, and is supplemented (when available) with data for EFTA members and for the acceding and candidate countries to the EU. This publication aims to cover some of the most popular data within the domain of agriculture, forestry and fisheries statistics. It may be viewed as an introduction to European statistics in this area and provides a starting point for those who wish to explore the wide range of data that is freely available on Eurostat's website at: http://ec.europa.eu/eurostat.

Eurostat is the statistical office of the EU, situated in Luxembourg. Its task is to provide the EU with statistics at a European level that enable comparisons between countries and regions. Eurostat's mission is 'to be the leading provider of high quality statistics on Europe'.

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Data extraction period

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Table of contents

Introduction

This pocketbook on *Agriculture, forestry and fishery statistics* presents a selection of tables and figures on a wide range of industry-related topics, covering the 28 EU Member States. The most recent data are presented where possible, the latest reference year (for some data sets) being 2012.

The official statistics in this pocketbook are aimed at both specialists (including policymakers at EU and Member State level, enterprises, farms, producers' and consumers' associations, consultancy bodies, trade unions *et al*) and generalists who have an interest in the subject. Statistics provide tools to help inform, monitor and measure progress towards agreed goals. As such, they are a key component of governance — for identifying needs, formulating objectives and orientating policies and goals — through evidence-based decision-making. For the European Commission, statistics are also required to support dialogue with the EU Member States and other partners.

The Common Agricultural Policy (CAP) is the agricultural policy of the EU. Its main objectives are to ensure a decent standard of living for farmers, to provide a stable and safe food supply chain at affordable prices for consumers, and to ensure the development of rural areas throughout the EU; a June 2013 reform of the CAP focused on the sustainable management of resources. Each of these objectives has been borne in mind when selecting the statistics shown in this pocketbook.

There is no common forestry policy for the EU; rather, the Member States have their own national forestry policies. Nevertheless, an EU Forest Action Plan was adopted in 2006. Of the four objectives laid out, statistics are most readily available to help examine the need to improve the long-term competitiveness of the EU's forest sector.

The Common Fisheries Policy (CFP) is the fisheries policy of the EU. It sets catch limits, restricts the size of the fishing fleet that sets to sea, and lays down technical measures such as those relating to fishing gear. In addition, the CFP aims to help producers get a fair price for their produce and ensure that consumers can trust the seafood that they eat. Statistics related to fishing production, catches, landings and the fishing fleet are presented in this pocketbook.

The relative weight of agriculture, forestry and fisheries in the EU-28 economy has been in almost perpetual decline over the last 50 years. Over the relatively short period (2000–12) for which an EU-28 time series is available, the share of agriculture, forestry and fisheries in total economic activity (as measured by gross value added) fell from 2.1 % to 1.7 %. Agriculture's share of total economic activity in the EU-28 was 1.4 % in 2012, compared with 0.2 % for forestry and 0.1 % for fisheries.

This edition of the *Agriculture, forestry and fishery statistics* pocketbook is divided into eight parts.

Chapter 1 throws the spotlight on agriculture in Croatia. On 1 July 2013, Croatia became the 28th and latest Member State to join the EU. This special feature provides readers with an overview of essential structural statistics concerning agriculture in Croatia, providing key information regarding the number of holdings, land use and the agricultural labour force.

Chapters 2 to 6 present the EU's agricultural industry with information on the latest reference period and developments over time. These chapters move beyond a structural presentation of the EU's agricultural industry, providing information on agri-environmental and rural development issues, reflecting recent reforms of the CAP:

- **Chapter 2** presents the results of the last agricultural census at European level (which took place in 2010). For this pocketbook, data on Croatia has been added to the analysis so the statistics presented now refer to the EU-28;
- **Chapter 3** covers economic developments within the agricultural industry and presents data on output and input values, income indicators, as well as price trends;
- **Chapter 4** presents the most recent data on some of the most important agricultural products grown in the EU, first for crops (cereals, oilseeds, fruit and vegetables, grapes and olives) and then for livestock, meat and milk production;
- **Chapter 5** provides a small selection of indicators that are related to the interaction between agriculture and the environment. More specifically three of these indicators relate to climate change issues (greenhouse gas emissions, ammonia emissions and manure storage) and one to changing landscape features;
- **Chapter 6** presents a snapshot of agriculture within the context of rural development, making use of statistics that have been produced using an urban-rural typology.

The remaining two chapters go beyond agriculture to look at the state of the EU's forestry and fishery industries:

- **Chapter 7** provides an overview of the most recent forestry data;
- **Chapter 8** provides a summary of fishery catches, landings of fishery products, aquaculture production and information on fishing fleets.

This pocketbook reflects only a relatively small proportion of the statistics that are collected on the agricultural, forestry and fishery industries. More detailed data as well as methodological information both for these topics and a much broader range of economic, social and environmental themes can be found on the Eurostat website at: http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home

This website offers free access to Eurostat's databases, predefined tables, methodological documents and publications.

Special focus — the structure of agriculture in Croatia

On 1 July 2013, Croatia became the 28th and latest Member State to join the European Union (EU). This special focus throws the spotlight on structural aspects of agriculture in the newest Member State.

Once every 10 years an agricultural census is conducted in the EU, with intermediate sample surveys (farm structure surveys) carried out two or three times between two censuses. These censuses and intermediate surveys collect a range of information about agricultural holdings (farms), covering land use, farm management, the farm labour force and livestock numbers, as well as issues related to rural development. Ahead of its accession to the EU, Croatia conducted both a 2007 farm structure survey (FSS) and a 2010 survey. Unlike the EU-27 Member States, for whom the farm structure survey in 2010 was carried out as a census, Croatia carried out a sample survey; this chapter presents some selected results.

Agricultural holdings

Croatia had 233 280 agricultural holdings (or farms) in 2010, working 1.3 million hectares of land (the utilised agricultural area). This compared with 12.0 million agricultural holdings across the EU-27 working 172.8 million hectares in 2010 (see Table 1.1). A small majority (54.4 %) of farmland in Croatia was worked by the owner in 2010, the remainder (45.6 %) being worked by tenant farmers.

Table 1.1: Key structural agricultural indicators, 2010

	Croatia	EU-27	Share of Croatia in EU-28 (%)
Number of holdings	233 280	12 014 710	1.9
Utilised agricultural area (hectares) (1)	1 316 010	172 799 570	0.8
Average area per holding (hectares)	5.6	14.4	-
Livestock units (LSU)	1 020 180	134 192 160	0.8
Number of persons working on farms (regular labour force)	513 680	24 960 570	2.0

(1) EU-27: excluding common land in Greece.

Source: Eurostat (online data codes: ef_kvaareg and ef_olfaa)

Farms in Croatia can be characterised as being relatively small: the average size of 5.6 hectares per holding in 2010 was considerably less than the average of 14.4 hectares per holding across the whole of the EU-27. Indeed, about one half (52.5 %) of all holdings in Croatia were less than 2 hectares in size, with the vast majority (89.4 %) being less than 10 hectares in size (see Figure 1.1).

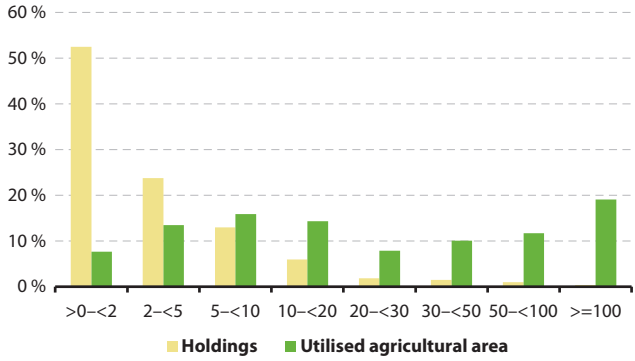
Agricultural land use

A little less than one quarter (23.3 %) of the total land area of Croatia was farmland in 2010. This was a relatively low share; it was only higher than the shares recorded in four other EU Member States (Sweden, Finland, Cyprus and Estonia) and represented about three fifths of the EU-27 average (40.0 %).

A little over two thirds (68.0 %) of the land used for farming (the utilised agricultural area) in Croatia was classed as arable land. Of the 895 220 hectares of arable land in 2010 about two thirds (65.0 %) was given over to cereals, of which a majority (310 450 hectares) was land under grain maize production. These relative shares were higher than the EU-27 average (see Figure 1.2). By contrast, the proportion of farmland used as permanent grassland and meadow in Croatia (25.8 %) was much lower than the EU-27 average (34.0 %) in 2010.

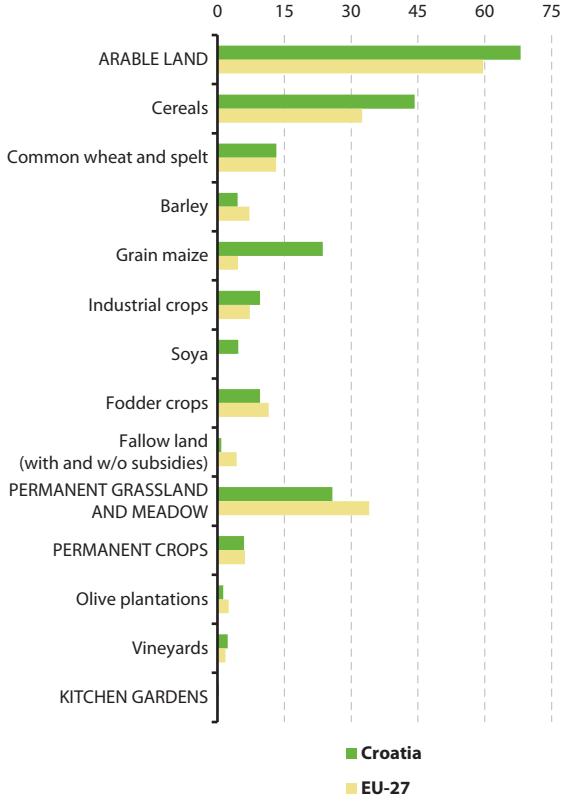
Figure 1.1: Distribution of agricultural holdings and utilised agriculture area, by size class, Croatia, 2010

(%, utilised agriculture area size classes in hectares)



Source: Eurostat (online data code: ef_kvaareg)

Figure 1.2: Agricultural land use, 2010 ([1])
(% of utilised agricultural area)



([1]) The entries in capital letters are higher level aggregates; entries in lower case are subcategories of the higher level aggregate below which they are found. For example, olive plantations and vineyards are two subcategories within permanent crops.

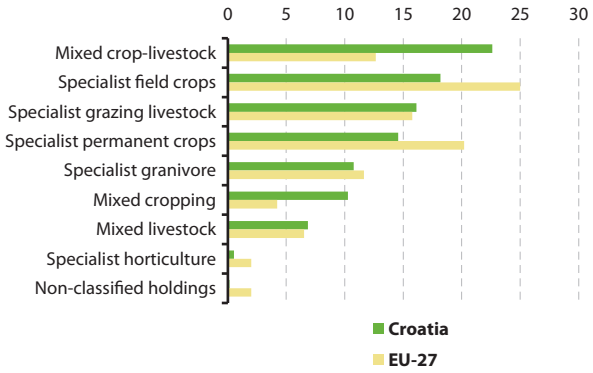
Source: Eurostat (online data code: ef_oluaareg)

Farm typology

The general make-up of the agricultural sector in terms of farm types was also somewhat different in Croatia when compared with the EU-27 (see Figure 1.3). A little over one in every five (22.6 %) holdings in Croatia was classified as being a mixed crop and livestock farm in 2010, compared with about one in every eight (12.6 %) farms in the EU-27. There was also a higher relative share of agricultural holdings classified as mixed cropping farms in Croatia (10.3 % compared with 4.2 % for the EU-27). By contrast, the proportion of holdings classified as specialist field crops farms (with cereals, oilseeds and/or protein crops) and specialist permanent crop farms (with vineyards, orchards and olive groves) in Croatia was lower than across the EU-27 (18.2 % and 14.6 % compared with 25.0 % and 20.2 % respectively).

Even though holdings classified as being specialist grazing livestock farms (with dairy cows, cattle, sheep or other ruminants) accounted for only 16.1 % of holdings in Croatia in 2010, they were estimated to have generated one third (33.4 %) of the standard output (an average monetary value used to provide an economic dimension). This was a much higher share of standard output than the average from specialist grazing livestock farms across the whole of the EU-27 (26.5 %). Likewise, the share of economic output generated by mixed crop and livestock farms in Croatia (14.9 %) was much higher than the average across the

Figure 1.3: Holdings by farm type, 2010
(% of holdings)

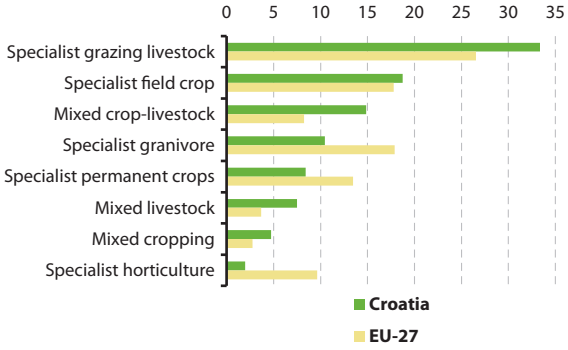


Source: Eurostat (online data code: ef_oluft)

EU-27 (8.3 %), in part reflecting the much higher proportion of holdings classified as mixed crop-livestock farms. By contrast, the proportion of economic output generated by specialist granivore farms (with pigs or poultry), specialist permanent crop farms and specialist horticulture farms in Croatia was much lower (10.5 %, 8.4 % and 2.0 % respectively) than on average (17.9 %, 13.5 % and 9.6 % respectively) across the EU-27 in 2010 (see Figure 1.4).

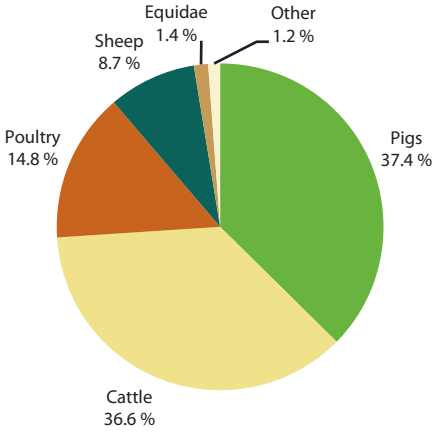
A little over two thirds (67.0 %) of the agricultural output of Croatia in 2010 came from specialist grazing farms, specialist field crop farms and mixed-crop livestock holdings, which was a much higher proportion than the EU-27 average (52.6 %), where specialist granivore farms (with pigs or poultry) and specialist permanent crop farms accounted for a higher share of economic output.

Figure 1.4: Economic output of holdings, by farm type, 2010
(% of standard output)



Source: Eurostat (online data code: ef_kvftreg)

Figure 1.5: Livestock, Croatia, 2010
(%, based on livestock units)



Source: Eurostat, Farm structure survey, 2010

Table 1.2: Number of holdings with livestock, by livestock unit size class, Croatia, 2010

Livestock unit (LSU) size classes	Number of holdings	Livestock		
		Total	Equidae	Cattle
		(number of livestock units)		
Total	194 090	1 020 180	14 220	373 090
0	990	0	0	0
> 0–< 5	157 490	250 910	2 670	39 230
5–< 10	19 610	135 930	2 620	55 240
10–< 15	6 360	77 340	1 150	44 020
15–< 20	3 160	54 360	1 490	30 220
20–< 50	4 870	142 860	2 550	87 850
50–< 100	1 020	70 370	3 150	38 350
100–< 500	510	88 720	570	28 110
>= 500	90	199 680	0	50 080

Livestock unit (LSU) size classes	Livestock			
	Sheep	Pigs	Poultry	Other
	(number of livestock units)			
Total	88 620	381 420	150 810	12 030
0	0	0	0	0
> 0–< 5	28 510	126 130	48 300	6 080
5–< 10	20 890	45 180	9 930	2 090
10–< 15	9 540	18 650	2 820	1 170
15–< 20	8 740	11 090	1 940	890
20–< 50	13 960	27 470	9 380	1 660
50–< 100	5 080	18 800	4 930	60
100–< 500	1 880	47 040	11 040	80
>= 500	40	87 060	62 490	0

Source: Eurostat, Farm structure survey, 2010

Livestock units

A little over four in every five farms (83.2 %) in Croatia had some livestock in 2010, a much higher proportion than that recorded for the EU-27 (56.0 %). In order to compare livestock of various species and ages, numbers of animals are given a weighting and transformed into a reference livestock unit (an LSU). On this basis, the 'national herd' of 1.0 million LSU in Croatia was dominated by pigs (37.4 %), cattle (36.6 %) and poultry (14.8 %) — see Figure 1.5. Not only can farms in Croatia be characterised as being small in terms of land area but also in terms of their livestock; on average, each holding that had livestock in Croatia had just 5.3 LSU (the equivalent of just over five adult dairy cows), compared with 20.0 LSU on each holding that had livestock in the EU-27 in 2010. Indeed, the vast majority (81.1 %) of the holdings in Croatia that had livestock had less than 5 LSU.

About one quarter (24.6 %) of the 'national herd' in Croatia was found on the smallest holdings (of between 0 and 5 LSU) in 2010. A further one fifth of the 'herd' was found on the largest holdings (with over 500 LSU), even though such holdings accounted for 0.05 % of the total number of holdings in Croatia with livestock (see Table 1.2).

Agricultural labour force

According to the EU's labour force survey, agriculture, forestry and fishing employed 229 200 persons aged over 15 in Croatia in 2010, the equivalent of 14.9 % of the total workforce over 15 years old. This was one of the highest rates among EU Member States — as the EU-27 average was 5.2 % — only being surpassed by the rate in Romania (30.1 %).

The farm structure survey carried out in 2010 suggests that a much higher number of people worked regularly in the Croatian agricultural industry (513 680 people). Many of these people were family helping out on the farm but having their main employment elsewhere. After taking into account the amount of time actually worked, the regular agricultural labour force in Croatia was estimated to be the equivalent of 179 290 people working full-time (in annual work units). With the equivalent of an additional 5 500 full-time workers coming from non-regular agricultural labour and persons not directly employed by the holding, the total workforce in Croatian agriculture was equivalent to 184 480 full-time workers (see Table 1.3). This represented 1.9 % of the full-time equivalent agricultural workforce in the EU-27 in 2010.

Farming in Croatia is very much a family affair; on average 90.7 % of the labour input for agriculture (measured in annual work units) was carried out by the farmer and/or a member of his/her family in 2010. This was a much higher proportion than the average for the EU-27 (76.4 %). Two in every five (40.2 %) regular agricultural workers in Croatia was female, a slightly higher proportion than the corresponding EU-27 average (37.5 %). However, the proportion of female sole holders (in whose name the holding was operated) was lower in Croatia than across the EU-27 (20.9 % compared with 23.2 %).

A relatively small proportion (6.0 %) of holdings in Croatia had another gainful activity in addition to farming. Of the holdings with another gainful activity, about one half (49.7 %) were involved in the processing of farm products with a further quarter (25.7 %) involved in tourism.

Table 1.3: Agricultural labour force, Croatia, 2010

(units)

	Persons	Annual work units
Direct labour force	:	184 480
Regular labour force	513 680	179 290
Family labour force	499 350	167 560
Non-family labour force, employed on a regular basis, including group holders	14 330	11 730
Labour force, employed on a non-regular basis	:	5 200
Labour force, not directly employed by the holding	:	300

Source: Eurostat (online data code: ef_olfftecs)

DATA SOURCES AND AVAILABILITY

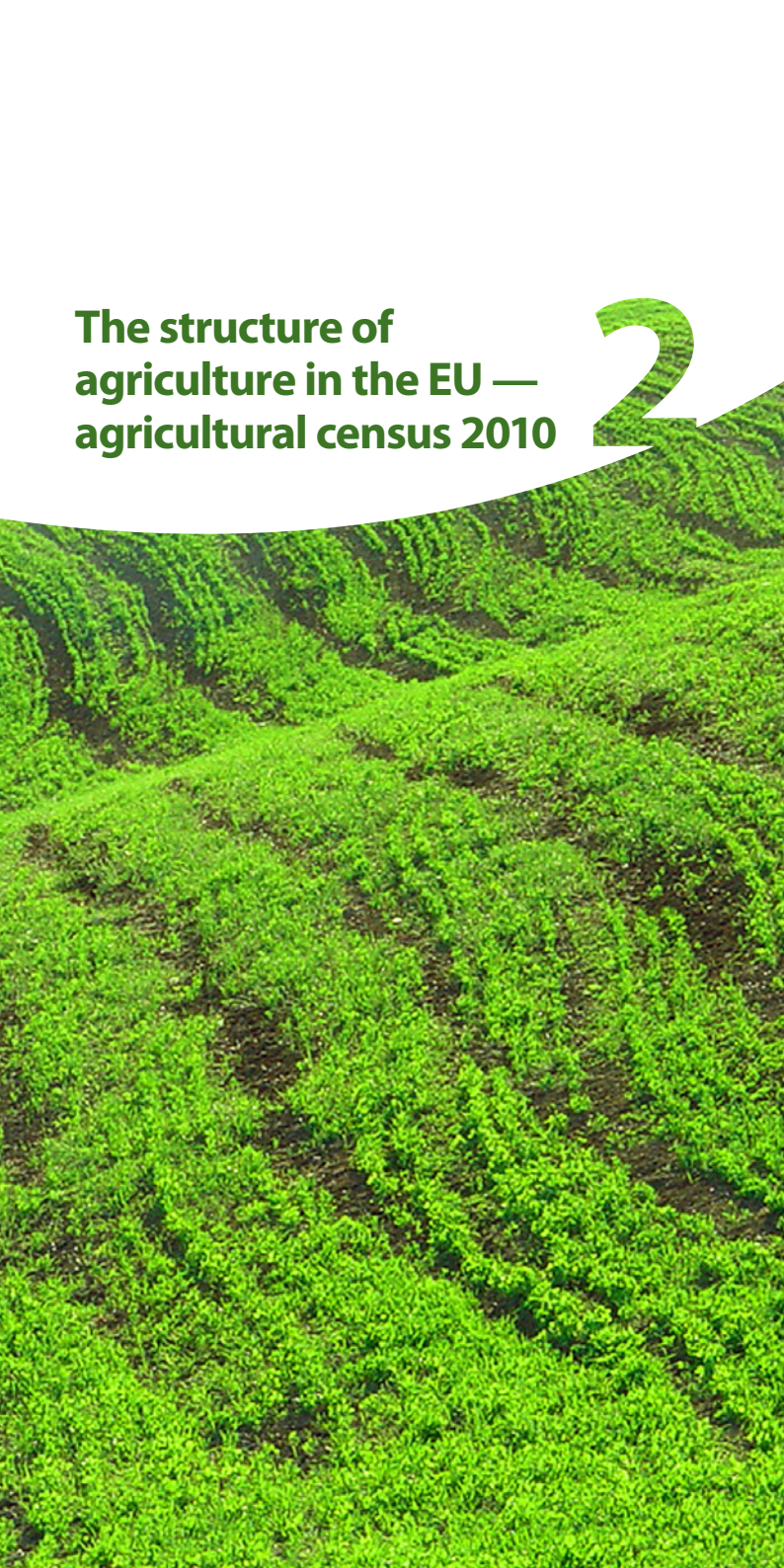
Croatia conducted its first independent agricultural census in 1960. However, surveys on the structure of agriculture during the 1970s–90s were based on a different methodology to the farm structure survey. As a prospective member of the EU, Croatia carried out a farm structure survey in 2007 and 2010; the responsible body for this work was the Croatian Bureau of Statistics.

In 2010, all farms of at least 0.4 hectares of agricultural area or 0.1 hectares of vineyards or orchards were surveyed for the farm structure survey in Croatia. Furthermore, farms falling below these thresholds but producing vegetables, herbs, strawberries, mushrooms, flowers or ornamental plants for selling purposes were also included in the target population, as well as holdings with at least 0.5 livestock units. This coverage of small farms means that the results from 2007 to 2010 are not strictly comparable because of the change in coverage. The FSS covered 98 % of the utilised agricultural area and 98 % of the livestock in Croatia in 2010.

The use of common land in Croatia is widespread, though farmers have difficulties in estimating the share of common land they actually make use of. Accordingly, common land was estimated through a model which took into account the number of grazing animals, their daily intake of grass and the number of days the animals grazed.

The structure of agriculture in the EU — agricultural census 2010

2



The structure of agriculture in the Member States of the European Union (EU) varies as a function of differences in geology, topography, climate and natural resources, as well as the diversity of regional activities, infrastructure and social customs. The survey on the structure of agricultural holdings, also known as the farm structure survey (FSS), helps assess the agricultural situation across the EU, monitoring trends and transitions in the structure of agricultural holdings, while also modelling the impact of external developments or policy proposals.

This chapter presents some statistics from the most recent farm structure survey that was conducted as an agricultural census in 2009/10. This was the first synchronised agricultural census across all EU-27 Member States, as well as Norway and Switzerland; a sample survey was also carried out in Croatia. This coordinated effort has strengthened the coherent and comparable nature of the structural data. Nevertheless, it should be noted that some methodological changes were introduced for the latest census, which limit comparability with other survey years; the minimum size threshold for agricultural holdings was raised in some of the EU Member States, while ensuring that 98 % of the farmland (known as the utilised agricultural area) and livestock of each country were covered, and common land was included.

Agricultural holdings

There were 12.2 million farms across the EU-28 in 2010, working 174.1 million hectares of land (the utilised agricultural area) or two fifths (40.0 %) of the total land area of the EU-28. The average size of each agricultural holding (farm) in the EU-28 was 14.2 hectares (see Table 2.1). However, there were stark contrasts

Table 2.1: Key farm variables, 2010

	Number of holdings (1 000)	Utilised agricultural area — UAA (1) (1 000 hectares)	Livestock units — LSU (1 000 LSU)	Labour force (2) (1 000 annual work units)	Standard output (EUR million)	Average area of holdings (hectares)
EU-28	12 248.0	174 115.6	135 212.3	9 945.8	307 889.5	14.2
BE	42.9	1 358.0	3 798.7	61.6	7 247.8	31.7
BG	370.5	4 475.5	1 149.5	406.5	2 536.7	12.1
CZ	22.9	3 483.5	1 722.5	108.0	3 852.2	152.4
DK	42.1	2 646.9	4 919.4	52.3	8 430.8	62.9
DE	299.1	16 704.0	17 792.6	545.5	41 494.1	55.8
EE	19.6	940.9	306.3	25.1	594.6	48.0
IE	139.9	4 991.4	5 787.4	165.4	4 297.7	35.7
EL	723.0	3 477.9	2 406.5	429.5	6 700.0	4.8
ES	989.8	23 752.7	14 830.9	889.0	34 173.1	24.0
FR	516.1	27 837.3	22 674.2	779.7	50 733.2	53.9
HR	233.3	1 316.0	1 020.2	184.5	2 114.7	5.6
IT	1 620.9	12 856.1	9 911.5	953.8	49 460.3	7.9
CY	38.9	118.4	200.8	18.6	458.9	3.0
LV	83.4	1 796.3	474.6	85.2	777.2	21.5
LT	199.9	2 742.6	900.1	146.8	1 526.3	13.7
LU	2.2	131.1	167.7	3.7	268.6	59.6
HU	576.8	4 686.3	2 483.8	423.5	5 241.0	8.1
MT	12.5	11.5	41.7	4.9	95.9	0.9
NL	72.3	1 872.4	6 711.5	161.7	18 930.0	25.9
AT	150.2	2 878.2	2 517.2	114.3	5 879.3	19.2
PL	1 506.6	14 447.3	10 377.2	1 897.2	18 987.1	9.6
PT	305.3	3 668.2	2 206.0	363.4	4 639.7	12.0
RO	3 859.0	13 306.1	5 444.2	1 610.3	10 420.3	3.4
SI	74.7	482.7	518.5	76.7	913.2	6.5
SK	24.5	1 895.5	668.3	56.1	1 731.0	77.5
FI	63.9	2 291.0	1 121.1	59.7	3 097.6	35.9
SE	71.1	3 066.3	1 751.9	56.9	3 733.3	43.1
UK	186.8	16 881.7	13 308.4	266.3	19 555.0	90.4
IS	2.6	1 595.7	161.0	4.2	237.1	616.1
NO	46.6	1 005.9	1 229.3	46.4	3 156.2	21.6
CH	59.1	1 047.8	1 793.8	96.0	5 717.1	17.7
ME	48.9	221.3	118.4	47.9	127.1	4.5

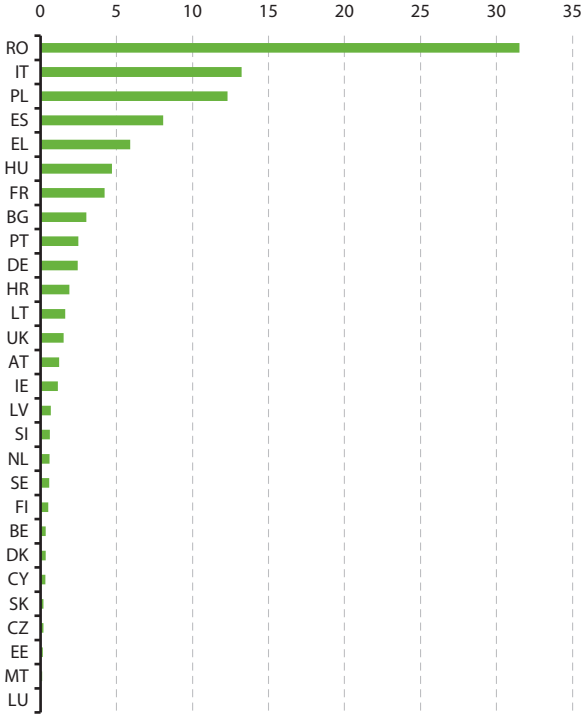
(1) Excluding common land in Greece.
(2) Labour force directly employed on the farm.

Source: Eurostat (online data code: ef_kvaareg)

in the structure of agriculture across the EU: on the one hand, there were a large number (6.0 million or half of all holdings) of very small farms (less than 2 hectares in size) that farmed a small proportion (2.5 %) of the total land area that was used for farming in 2010 and, on the other, a small number (2.7 % of all holdings) of very large farms (over 100 hectares) that farmed almost half (50.2 %) of the farmland in the EU-28 (see Tables 2.2 and 2.3 overleaf).

Almost one third (31.5 % or 3.9 million) of all agricultural holdings in the EU-28 were in Romania (see Figure 2.1). These holdings can be characterised as being small; three quarters of holdings in Romania were under 2.0 hectares in size. One in four of the EU-28's holdings were in Italy (13.2 %) or Poland (12.3 %) and these too can be characterised as being small (on average, under 10.0 hectares in size). There were a number of EU Member States, however, where larger farms were more typical; a majority

Figure 2.1: Agricultural holdings, 2010
(% share of number of holdings in the EU-28)



Source: Eurostat (online data code: ef_kvaareg)

of farms in Germany (53.9 %), France (54.4 %), Denmark (55.1 %), Finland (57.0 %), Ireland (57.8 %), the United Kingdom (61.4 %) and Luxembourg (65.5 %) were larger than 20 hectares. Indeed, the average size of an agricultural holding in the United

Table 2.2: Agricultural holdings, by size of holding, 2010
(number of holdings)

	Total	Size of holding in hectares of utilised agricultural area			
		0	< 2	2–< 5	5–< 10
EU-28	12 247 990	258 630	5 759 760	2 474 030	1 337 660
Share of EU-28	100.0 %	2.1 %	47.0 %	20.2 %	10.9 %
BE	42 850	950	4 270	4 450	5 190
BG	370 490	13 150	294 960	30 390	10 730
CZ	22 860	290	1 980	1 260	4 180
DK	42 100	1 590	520	950	8 050
DE	299 130	1 410	14 260	11 690	47 310
EE	19 610	150	2 210	4 250	4 070
IE	139 890	130	2 210	7 380	15 750
EL	723 010	6 180	367 160	183 820	87 770
ES	989 800	22 500	270 280	232 800	141 850
FR	516 100	9 490	66 580	62 690	46 640
HR	233 280	230	122 560	55 430	30 240
IT	1 620 880	5 290	819 360	357 670	186 150
CY	38 860	490	28 710	5 620	2 030
LV	83 390	320	9 590	18 390	22 660
LT	199 910	260	32 310	84 830	39 900
LU	2 200	20	200	160	220
HU	576 810	42 790	412 740	46 060	26 540
MT	12 530	340	10 790	1 120	230
NL	72 320	1 700	8 000	11 000	10 260
AT	150 170	1 080	16 160	30 220	26 590
PL	1 506 620	7 960	355 220	468 200	334 950
PT	305 270	1 400	152 460	77 060	33 170
RO	3 859 040	134 710	2 731 730	727 390	182 440
SI	74 650	190	20 280	24 920	17 440
SK	24 460	740	8 720	6 290	2 660
FI	63 870	400	1 440	4 340	7 970
SE	71 090	740	560	7 630	15 820
UK	186 800	4 130	4 500	8 020	26 850
IS	2 590	30	50	20	20
NO	46 620	1 790	1 050	3 410	8 110
CH	59 070	1 340	3 840	4 880	9 330
ME	48 870	590	35 270	7 630	2 710

Source: Eurostat (online data code: ef_kvaareg)

Kingdom (90.4 hectares) was a little over six times as high as the EU-28 average in 2010, and the average size of holdings in the Czech Republic was higher still (152.4 hectares) as a result of a small number of very large farms.

Table 2.2: Agricultural holdings, by size of holding, 2010 *(cont.)*
(number of holdings)

Size of holding in hectares of utilised agricultural area					
10–< 20	20–< 30	30–< 50	50–< 100	≥ 100	
916 570	382 560	399 160	393 890	325 820	EU-28
7.5 %	3.1 %	3.3 %	3.2 %	2.7 %	Share of EU-28
6 800	5 080	7 090	6 780	2 260	BE
6 820	2 950	3 060	2 930	5 490	BG
3 950	2 060	2 310	2 420	4 420	CZ
7 790	4 310	4 900	5 920	8 080	DK
63 160	30 970	45 100	51 620	33 620	DE
3 470	1 480	1 170	1 090	1 720	EE
33 580	24 690	30 670	20 760	4 720	IE
45 580	14 670	10 850	5 480	1 500	EL
110 960	53 010	54 730	52 470	51 190	ES
50 150	33 280	55 240	97 780	94 250	FR
13 880	4 330	3 470	2 290	850	HR
120 120	46 690	40 920	29 210	15 490	IT
1 010	370	290	220	120	CY
17 490	5 670	3 950	2 740	2 570	LV
21 470	6 640	5 870	4 830	3 800	LT
170	120	240	640	440	LU
19 430	7 950	7 440	6 410	7 450	HU
40	10	0	:	:	MT
10 820	7 540	11 680	9 130	2 210	NL
32 590	17 110	15 150	8 430	2 850	AT
218 510	59 970	35 310	16 840	9 650	PL
18 980	6 420	5 320	4 360	6 110	PT
43 610	9 730	8 210	7 480	13 730	RO
8 350	2 020	970	380	100	SI
1 630	730	700	780	2 210	SK
13 340	9 730	12 000	10 840	3 820	FI
14 180	7 140	8 030	9 070	7 930	SE
28 690	17 890	24 490	32 990	39 240	UK
30	40	90	230	2 090	IS
13 440	8 440	6 860	3 020	500	NO
19 350	11 400	6 980	1 830	120	CH
1 160	330	310	440	430	ME

Source: Eurostat (online data code: ef_kvaareg)

This contrast was also reflected in the economic size of holdings. Of the 12.2 million agricultural holdings in the EU-28 in 2010, 5.5 million holdings (44.6 %) had a standard output below EUR 2 000 and were responsible for only 1.4 % of total agricultural

Table 2.3: Utilised agriculture area, by size of the holding (UAA)
(hectares)

	Total	Size of holding in hectares of utilised agricultural area			
		0	< 2	2–< 5	5–< 10
EU-28	174 115 580	0	4 301 640	7 810 520	9 368 890
Share of EU-28	100.0 %	0.0 %	2.5 %	4.5 %	5.4 %
BE	1 358 020	0	4 290	14 870	37 620
BG	4 475 530	0	144 180	90 450	72 700
CZ	3 483 500	0	1 820	3 990	29 390
DK	2 646 860	0	350	3 410	57 640
DE	16 704 040	0	14 250	39 750	343 950
EE	940 930	0	2 920	14 100	29 300
IE	4 991 350	0	2 520	26 620	119 420
EL	3 477 930	0	309 510	575 890	603 720
ES	23 752 690	0	297 220	736 800	995 440
FR	27 837 290	0	62 450	204 860	332 500
HR	1 316 010	0	100 680	177 470	208 860
IT	12 856 050	0	726 990	1 119 850	1 295 300
CY	118 400	0	18 980	17 390	13 890
LV	1 796 290	0	9 410	63 030	161 620
LT	2 742 560	0	46 590	266 010	276 810
LU	131 110	0	120	570	1 560
HU	4 686 340	0	138 000	142 670	183 910
MT	11 450	0	5 970	3 290	1 540
NL	1 872 350	0	8 500	37 130	73 990
AT	2 878 170	0	19 060	98 840	194 040
PL	14 447 290	0	474 910	1 529 270	2 387 340
PT	3 668 150	0	157 430	239 600	230 340
RO	13 306 130	0	1 718 360	2 229 930	1 210 510
SI	482 650	0	21 900	82 460	122 320
SK	1 895 500	0	9 270	19 120	18 150
FI	2 290 980	0	990	16 410	59 550
SE	3 066 320	0	340	29 310	112 930
UK	16 881 690	0	4 630	27 430	194 550
IS	1 595 670	0	30	50	110
NO	1 005 940	0	1 000	12 390	60 470
CH	1 047 800	0	3 980	17 230	70 570
ME	221 300	0	23 000	23 500	18 540

Source: Eurostat (online data code: ef_kvaareg)

economic output in 2010. By contrast, the 1.9 % of holdings that had a standard output in excess of EUR 250 000 accounted for almost one half (47.8 %) of all agricultural economic output (see Tables 2.4 and 2.5).

Table 2.3: Utilised agriculture area, by size of the holding (UAA) *(cont.)*

(hectares)

Size of holding in hectares of utilised agricultural area					
10–< 20	20–< 30	30–< 50	50–< 100	≥ 100	
12 851 610	9 323 600	15 429 640	27 605 440	87 424 210	**EU-28**
7.4 %	5.4 %	8.9 %	15.9 %	50.2 %	**Share of EU-28**
98 990	125 130	276 030	466 910	334 160	BE
92 450	70 040	116 180	201 670	3 687 860	BG
55 590	49 780	88 400	169 360	3 085 160	CZ
112 080	105 960	190 590	426 090	1 750 750	DK
945 800	769 910	1 765 110	3 628 400	9 196 880	DE
48 690	35 970	45 050	76 210	688 710	EE
500 780	610 160	1 192 450	1 389 390	1 150 010	IE
622 390	352 260	406 600	356 960	250 600	EL
1 558 920	1 289 320	2 101 770	3 683 770	13 089 450	ES
718 070	818 870	2 186 620	7 059 970	16 453 960	FR
188 580	103 090	132 300	154 230	250 790	HR
1 663 480	1 128 980	1 556 920	1 994 070	3 370 460	IT
13 980	8 860	10 960	14 570	19 770	CY
242 980	137 190	150 570	187 680	843 790	LV
296 010	160 600	228 090	328 410	1 140 040	LT
2 450	2 990	9 850	47 540	66 030	LU
268 840	190 290	282 690	445 860	3 034 080	HU
460	160	0	:	:	MT
156 970	187 280	457 410	607 980	343 090	NL
471 340	418 800	579 310	568 470	528 300	AT
3 010 790	1 447 360	1 331 720	1 145 010	3 120 900	PL
262 130	155 070	202 820	303 090	2 117 670	PT
571 390	233 850	315 400	518 300	6 508 390	RO
113 120	48 480	36 150	25 350	32 880	SI
22 860	17 540	26 650	55 430	1 726 490	SK
197 000	240 580	465 950	746 910	563 590	FI
202 680	175 130	313 200	643 730	1 589 000	SE
412 790	439 950	960 850	2 360 080	12 481 400	UK
430	970	3 400	16 770	1 573 920	IS
197 200	206 320	259 100	199 800	69 660	NO
286 320	278 000	259 710	115 320	16 670	CH
15 500	7 850	12 360	31 650	88 900	ME

Source: Eurostat (online data code: ef_kvaareg)

Table 2.4: Agricultural holdings, by economic size class, 2010
(number of holdings)

	Total	Size of holding in terms of standard output in euros				
		0	< 2 000	2 000 – 3 999	4 000 – 7 999	8 000 – 14 999
EU-28	12 247 990	240 710	5 220 970	1 939 160	1 528 830	981 790
Share of EU-28	100.0 %	2.0 %	42.6 %	15.8 %	12.5 %	8.0 %
BE	42 850	160	1 340	1 580	2 590	3 230
BG	370 490	980	254 130	59 480	26 290	12 510
CZ	22 860	130	1 350	2 460	4 110	3 500
DK	42 100	1 210	820	1 140	3 780	5 830
DE	299 130	470	1 120	6 560	26 460	37 170
EE	19 610	3 520	5 080	2 940	2 750	1 750
IE	139 890	60	17 860	16 810	25 150	26 030
EL	723 010	5 310	235 680	140 840	134 970	95 590
ES	989 800	17 380	211 250	163 210	163 070	125 130
FR	516 100	2 110	41 740	32 470	41 760	42 280
HR	233 280	350	89 130	51 540	41 540	24 430
IT	1 620 880	23 800	494 590	263 770	236 340	177 020
CY	38 860	300	21 860	6 170	4 210	2 340
LV	83 390	7 660	39 240	14 560	10 130	4 910
LT	199 910	3 190	96 760	46 540	27 140	12 220
LU	2 200	:	20	110	140	180
HU	576 810	19 900	358 690	91 000	46 460	25 350
MT	12 530	3 120	5 130	1 210	1 200	740
NL	72 320	120	60	1 880	6 670	6 480
AT	150 170	250	20 800	13 640	20 320	20 550
PL	1 506 620	42 520	442 880	290 340	274 240	195 020
PT	305 270	2 710	116 540	71 840	48 550	24 970
RO	3 859 040	99 840	2 716 620	602 470	313 000	78 460
SI	74 650	0	15 690	17 650	18 120	10 650
SK	24 460	320	7 520	6 710	3 940	1 710
FI	63 870	1 210	3 160	6 320	10 560	10 510
SE	71 090	2 200	5 710	9 990	13 190	10 960
UK	186 800	1 890	16 200	15 930	22 150	22 270
IS	2 590	0	10	30	90	220
NO	46 620	40	190	920	4 280	7 740
CH	59 070	20	780	1 230	2 650	4 410
ME	48 870	1 250	30 180	9 640	5 350	1 830

Source: Eurostat (online data code: ef_kvecsleg)

Table 2.4: Agricultural holdings, by economic size class, 2010 *(cont.)*

(number of holdings)

Size of holding in terms of standard output in euros						
15 000 – 24 999	25 000 – 49 999	50 000 – 99 999	100 000 – 249 999	250 000 – 499 999	≥ 500 000	
602 070	627 140	466 510	411 810	148 600	80 570	**EU-28**
4.9%	5.1%	3.8%	3.4%	1.2%	0.7%	**Share of EU-28**
2 940	4 530	5 750	11 470	6 330	2 930	BE
6 060	4 750	2 570	1 990	1 010	730	BG
2 390	2 800	2 030	1 670	760	1 670	CZ
5 280	6 290	4 680	4 490	3 440	5 160	DK
30 850	42 320	49 310	63 970	27 640	13 280	DE
1 020	940	720	500	170	230	EE
17 570	15 160	11 160	8 660	1 040	400	IE
53 340	39 280	13 500	3 760	540	200	EL
82 430	93 750	68 070	43 160	13 850	8 510	ES
38 390	66 560	90 440	113 890	35 600	10 870	FR
11 880	8 800	3 860	1 380	200	160	HR
119 510	128 590	88 660	59 440	17 410	11 770	IT
1 230	1 180	810	500	150	110	CY
2 640	2 120	1 070	700	220	150	LV
5 700	4 580	2 180	1 110	270	240	LT
150	270	330	740	230	40	LU
13 000	10 520	5 920	3 590	1 080	1 330	HU
410	350	180	140	50	10	MT
4 890	6 360	6 920	16 970	13 370	8 600	NL
16 940	24 080	19 220	11 620	2 280	460	AT
112 890	94 620	35 710	12 830	3 390	2 180	PL
12 760	11 470	8 020	5 940	1 600	860	PT
22 240	13 370	6 450	4 120	1 450	1 010	RO
5 000	4 460	2 170	780	80	40	SI
890	860	670	660	370	810	SK
7 100	8 140	8 270	6 860	1 330	420	FI
7 080	7 450	5 540	5 570	2 260	1 150	SE
17 490	23 540	22 300	25 300	12 480	7 250	UK
330	560	590	620	110	30	IS
7 460	8 730	8 010	7 170	1 650	440	NO
5 540	10 600	16 090	14 000	2 900	860	CH
430	140	40	10	0	0	ME

Source: Eurostat (online data code: ef_kvecsleg)

Table 2.5: Standard output of agricultural holdings, by economic size class, 2010

(EUR million)

	Total	Size of holding in terms of standard output in euros				
		0	< 2 000	2 000 – 3 999	4 000 – 7 999	8 000 – 14 999
EU-28	307 889	0	4 247	5 574	8 642	10 752
Share of EU-28	100.0 %	0.0 %	1.4 %	1.8 %	2.8 %	3.5 %
BE	7 247.8	0.0	1.6	4.7	15.4	36.4
BG	2 536.7	0.0	221.5	164.1	144.7	135.4
CZ	3 852.2	0.0	1.7	7.4	24.0	38.6
DK	8 430.8	0.0	1.0	3.4	23.0	65.5
DE	41 494.1	0.0	1.3	20.9	161.1	417.4
EE	594.6	0.0	4.6	8.6	15.7	19.1
IE	4 297.7	0.0	18.6	50.0	147.3	289.2
EL	6 700.0	0.0	242.0	409.0	772.5	1 046.8
ES	34 173.1	0.0	224.8	475.8	934.8	1 376.8
FR	50 733.2	0.0	40.5	96.1	243.3	473.1
HR	2 114.7	0.0	92.5	147.8	233.8	263.5
IT	49 460.3	0.0	512.3	765.1	1 354.6	1 949.7
CY	458.9	0.0	17.2	17.6	23.7	25.6
LV	777.2	0.0	28.2	41.9	56.2	53.2
LT	1 526.3	0.0	81.1	132.6	150.0	131.6
LU	268.6	0.0	0.0	0.3	0.8	2.0
HU	5 241.0	0.0	273.5	251.6	259.3	275.4
MT	95.9	0.0	3.2	3.5	6.8	8.2
NL	18 930.0	0.0	0.1	6.5	39.1	71.9
AT	5 879.3	0.0	20.3	40.5	118.9	229.4
PL	18 987.1	0.0	471.8	842.0	1 566.4	2 135.5
PT	4 639.7	0.0	122.9	205.0	271.6	271.0
RO	10 420.3	0.0	1 810.3	1 713.9	1 686.1	818.0
SI	913.2	0.0	19.0	51.8	103.1	114.5
SK	1 731.0	0.0	8.6	19.1	21.7	18.5
FI	3 097.6	0.0	4.0	18.8	61.9	116.9
SE	3 733.3	0.0	7.6	29.5	76.5	120.5
UK	19 555.0	0.0	17.3	46.9	129.5	248.2
IS	237.1	0.0	0.0	0.1	0.5	2.6
NO	3 156.2	0.0	0.3	2.9	26.2	87.8
CH	5 717.1	0.0	1.0	3.7	15.7	50.5
ME	127.1	0.0	20.0	27.4	29.3	19.2

Source: Eurostat (online data code: ef_kvecsleg)

Table 2.5: Standard output of agricultural holdings, by economic size class, 2010 *(cont.)*

(EUR million)

Size of holding in terms of standard output in euros						
15 000 – 24 999	25 000 – 49 999	50 000 – 99 999	100 000 – 249 999	250 000 – 499 999	≥ 500 000	
11 662	22 234	33 106	64 464	50 933	96 276	**EU-28**
3.8 %	7.2 %	10.8 %	20.9 %	16.5 %	31.3 %	**Share of EU-28**
58.2	165.0	422.5	1 908.1	2 184.0	2 451.9	BE
116.1	164.9	179.9	315.5	352.1	742.6	BG
46.6	99.5	143.8	264.2	272.0	2 954.3	CZ
103.1	224.0	332.0	724.9	1 257.8	5 696.2	DK
602.1	1 535.9	3 593.0	10 284.7	9 437.2	15 440.4	DE
19.8	33.5	50.0	76.3	60.2	306.8	EE
339.8	530.2	801.5	1 258.2	347.6	515.4	IE
1 025.7	1 344.7	903.9	534.6	180.8	239.9	EL
1 598.0	3 337.6	4 775.6	6 539.3	4 816.1	10 094.3	ES
756.2	2 447.1	6 612.9	17 911.3	11 996.9	10 155.8	FR
226.2	304.9	265.2	200.6	66.8	313.4	HR
2 320.9	4 557.3	6 227.5	9 054.6	5 989.0	16 729.4	IT
23.9	41.6	57.4	75.3	51.6	125.0	CY
50.6	73.5	74.2	107.5	77.2	214.8	LV
109.7	157.0	151.9	166.0	95.8	350.6	LT
2.9	9.9	24.7	124.2	72.7	31.0	LU
249.5	365.8	412.5	545.1	372.8	2 235.6	HU
7.9	12.1	13.1	21.0	15.0	5.1	MT
95.7	228.8	505.6	2 960.0	4 612.5	10 409.6	NL
332.1	871.0	1 342.2	1 749.1	747.1	428.6	AT
2 179.4	3 273.9	2 408.0	1 899.0	1 166.6	3 044.4	PL
245.8	403.8	566.0	906.5	547.9	1 099.3	PT
421.7	459.4	447.8	634.0	500.7	1 928.4	RO
96.2	156.2	147.3	113.6	27.9	83.8	SI
17.3	30.6	47.6	105.4	133.5	1 328.7	SK
137.4	292.4	600.2	1 029.1	435.5	401.4	FI
137.6	263.2	393.5	886.3	771.0	1 047.5	SE
341.3	850.1	1 606.5	4 069.3	4 344.7	7 901.2	UK
6.6	20.4	41.4	95.4	36.4	33.8	IS
146.0	309.8	583.2	1 074.2	545.2	380.5	NO
110.0	393.0	1 172.2	2 113.3	971.9	885.7	CH
8.1	4.5	2.7	1.6	0.0	0.0	ME

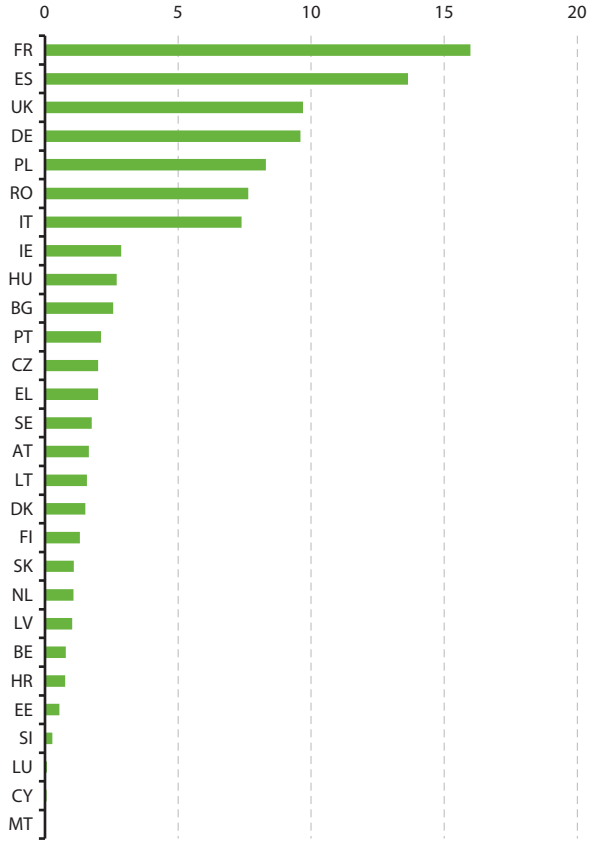
Source: Eurostat (online data code: ef_kvecsleg)

Agricultural land use

One half of all the land used in agriculture across the EU-28 was farmed in just four Member States: France (16.0 % of the EU-28 total), Spain (13.6 %), the United Kingdom (9.7 %) and Germany (9.6 %). About another one quarter (23.3 %) was farmed in Poland, Romania and Italy, the other 21 Member States farming the other quarter of the EU-28's farmland (see Figure 2.2).

Three fifths (59.7 %) of the farmland in the EU-28 was used as arable land in 2010, a majority being used for cereal production. A further one third (34.0 %) was permanent grassland and meadow.

Figure 2.2: Utilised agricultural area, 2010
(% share of total utilised agricultural area in the EU-28)



Source: Eurostat (online data code: ef_oluft)

Permanent crops, such as vineyards, olive trees and orchards, accounted for a 6.1 % share and kitchen gardens around 0.2 % (see Table 2.6).

The majority of farmland was used as arable land in 21 of the EU Member States, this share rising to above 90 % in Denmark and Finland. However, in Austria, Luxembourg, Slovenia, the United Kingdom and Ireland, where there are a high proportion of farms

Table 2.6: Utilised agricultural area, by land use, 2010
(1 000 hectares)

	Total utilised agricultural area	Arable land	Permanent grassland and meadow	Permanent crops	Kitchen gardens
EU-28	174 115.6	103 922.6	59 140.7	10 702.6	349.6
Share of EU-28	100.0 %	59.7 %	34.0 %	6.1 %	0.2 %
BE	1 358.0	836.7	499.7	21.5	0.1
BG	4 475.5	3 124.9	1 240.6	99.7	10.4
CZ	3 483.5	2 517.5	928.8	37.0	0.2
DK	2 646.9	2 419.3	199.9	27.7	0.0
DE	16 704.0	11 846.7	4 654.7	198.8	3.9
EE	940.9	640.0	296.1	3.1	1.7
IE	4 991.4	1 011.7	3 978.5	1.0	0.2
EL (1)	3 477.9	1 767.9	750.7	950.3	9.1
ES	23 752.7	11 286.0	8 377.4	4 086.2	3.1
FR	27 837.3	18 386.1	8 418.9	1 018.3	14.0
HR	1 316.0	895.2	339.3	78.3	3.2
IT	12 856.1	7 009.3	3 434.1	2 380.8	31.9
CY	118.4	84.9	2.1	31.3	0.0
LV	1 796.3	1 120.0	651.1	8.5	16.8
LT	2 742.6	2 115.1	605.9	21.6	0.0
LU	131.1	62.0	67.6	1.5	0.0
HU	4 686.3	3 796.9	720.9	151.7	16.8
MT	11.5	9.1	0.0	1.3	1.1
NL	1 872.4	1 022.1	813.3	37.0	0.0
AT	2 878.2	1 371.3	1 439.5	65.2	2.2
PL	14 447.3	10 797.4	3 229.2	389.7	31.0
PT	3 668.2	1 173.1	1 784.6	690.7	19.7
RO	13 306.1	8 306.4	4 506.3	311.4	182.0
SI	482.7	169.1	285.7	26.8	1.1
SK	1 895.5	1 343.5	531.3	19.6	1.1
FI	2 291.0	2 253.5	33.0	4.6	0.0
SE	3 066.3	2 611.5	451.9	2.9	:
UK	16 881.7	5 945.5	10 900.0	36.2	0.0
IS	1 595.7	34.0	1 561.6	0.1	0.0
NO	1 005.9	827.1	175.8	3.1	0.0
CH	1 047.8	405.3	619.7	22.6	0.2
ME	221.3	4.1	210.2	4.7	2.4

(1) Excluding common land in Greece.

Source: Eurostat (online data code: ef_oluft)

that specialise in grazing livestock, a majority of farmland was permanent pasture and meadow. The proportion of farmland occupied by permanent crops was relatively high in some of the Mediterranean countries, the highest shares (a little over 25 %) being in Cyprus and Greece.

Farm typology

In 2010, one in every four (24.9 %) farms in the EU-28 was a holding with specialist field crops (for example, cereals, oilseeds

Table 2.7: Agricultural holdings, by farm type, 2010
(number of holdings)

	Total	Main farmtype based on standard output			
		Specialist field crops	Specialist horticulture	Specialist permanent crops	Specialist grazing livestock
EU-28	12 247 990	3 046 390	242 580	2 462 760	1 931 200
Share of EU-28	100.0 %	24.9 %	2.0 %	20.1 %	15.8 %
BE	42 850	8 330	3 920	1 190	18 580
BG	370 490	63 380	18 230	32 110	88 640
CZ	22 860	6 980	270	2 490	7 880
DK	42 100	17 290	880	1 970	11 490
DE	299 130	72 750	8 240	23 460	130 900
EE	19 610	6 760	570	320	4 780
IE	139 890	14 350	240	60	121 640
EL	723 010	134 960	13 920	420 550	48 580
ES	989 800	204 180	35 560	482 950	132 730
FR	516 100	133 620	16 130	92 570	182 210
HR	233 280	42 410	1 210	33 980	37 610
IT	1 620 880	383 760	37 800	891 400	129 510
CY	38 860	2 630	1 230	27 100	2 060
LV	83 390	31 660	420	1 180	22 380
LT	199 910	56 720	6 020	1 460	41 240
LU	2 200	150	30	360	1 440
HU	576 810	119 500	9 830	85 530	24 030
MT	12 530	3 900	1 520	930	1 180
NL	72 320	12 000	10 230	1 820	38 090
AT	150 170	36 840	1 440	13 110	75 200
PL	1 506 620	608 510	36 000	57 130	173 940
PT	305 270	28 260	8 790	111 530	47 740
RO	3 859 040	916 130	23 910	167 740	391 710
SI	74 650	12 780	530	8 690	29 890
SK	24 460	8 500	220	550	5 910
FI	63 870	36 750	2 370	440	18 730
SE	71 090	29 290	1 020	250	33 750
UK	186 800	54 000	2 050	1 890	109 360
IS	2 590	50	90	0	2 380
NO	46 620	13 060	1 010	650	27 330
CH	59 070	4 420	1 380	4 200	37 790
ME	48 870	11 570	500	2 050	22 560

Source: Eurostat (online data code: ef_kvftreg)

and vegetables). A further one in every five (20.1 %) farms was a specialist permanent crop holding (for example, with vineyards, olive groves or orchards). Specialist grazing livestock holdings (with dairy cows, cattle, sheep and other ruminants), granivore holdings (pigs or poultry), mixed livestock holdings and mixed crop-livestock holdings together accounted for almost half (46.7 %) of all agricultural holdings in the EU-28 (see Table 2.7).

Table 2.7: Agricultural holdings, by farm type, 2010 *(cont.)*
(number of holdings)

Main farmtype based on standard output					
Specialist granivores	Mixed cropping	Mixed livestock	Mixed crop-livestock	Non-classifiable holdings	
1 423 620	531 650	798 120	1 571 250	240 710	**EU-28**
11.6 %	4.3 %	6.5 %	12.8 %	2.0 %	**Share of EU-28**
4 060	730	1 540	4 350	160	BE
28 590	14 610	50 180	73 790	980	BG
450	250	700	3 720	130	CZ
3 450	1 000	310	4 500	1 210	DK
19 360	3 840	10 680	29 420	470	DE
370	430	500	2 380	3 520	EE
740	120	260	2 450	60	IE
5 420	39 230	6 710	48 320	5 310	EL
25 970	45 290	12 580	33 170	17 380	ES
20 740	13 020	12 190	43 520	2 110	FR
25 110	23 930	15 950	52 750	350	HR
9 370	105 450	4 230	35 590	23 800	IT
860	2 540	200	1 940	300	CY
2 950	1 240	4 760	11 140	7 660	LV
1 310	29 560	18 760	41 670	3 190	LT
20	10	50	130	:	LU
207 140	16 250	16 000	78 630	19 900	HU
610	870	120	310	3 120	MT
6 270	850	1 070	1 910	120	NL
8 650	2 130	4 420	8 140	250	AT
60 070	65 570	125 950	336 930	42 520	PL
7 120	31 580	16 270	51 280	2 710	PT
974 710	125 140	484 900	674 970	99 840	RO
910	5 510	4 930	11 420	0	SI
1 310	270	1 840	5 570	320	SK
1 740	800	100	1 730	1 210	FI
950	430	270	2 940	2 200	SE
5 370	1 000	2 650	8 580	1 890	UK
30	10	0	30	0	IS
2 040	330	660	1 500	40	NO
2 210	1 310	3 390	4 390	20	CH
4 800	530	2 920	2 710	1 250	ME

Source: Eurostat (online data code: ef_kvftreg)

Livestock units

In order to compare different livestock, a notional unit called a 'livestock unit' (LSU) is used. To calculate livestock units, a range of agreed weights are applied to the various types of farm animal to provide figures that are equivalent to one adult dairy cow or 10 sheep. On this basis, the 'EU-28's livestock herd' was 135.2 million LSU in 2010, about one half (47.4 %) of which was cattle, a little over one quarter (27.4 %) of which was pigs and 15.0 % of which was poultry (see Table 2.8). Just over half (50.7 %) of the 'EU-28's livestock herd' was located in just four Member States, namely: France, Germany, Spain and the United Kingdom (see Figure 2.3).

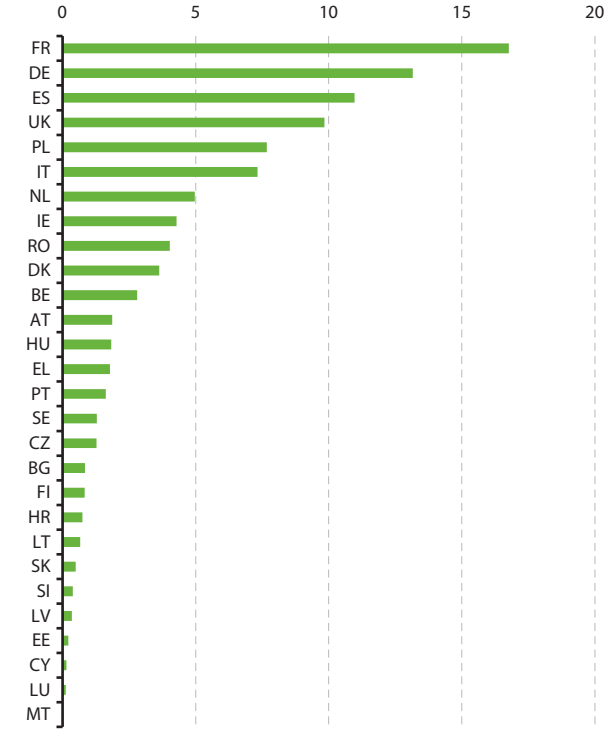
Table 2.8: Livestock units, 2010

(1 000 LSU)

	Total	Cattle	Sheep	Goats	Pigs	Poultry	Others
EU-28	135 212	64 045	9 599	1 231	37 076	20 332	2 929
Share of EU-28	100.0 %	47.4 %	7.1 %	0.9 %	27.4 %	15.0 %	2.2 %
BE	3 798.7	1 831.1	12.1	3.2	1 578.6	340.6	33.2
BG	1 149.5	473.9	141.5	38.9	177.4	224.8	93.0
CZ	1 722.5	960.8	18.4	1.7	457.2	264.1	20.3
DK	4 919.4	1 134.0	16.0	1.3	3 516.0	204.3	47.8
DE	17 792.6	9 060.1	208.9	15.0	6 389.9	1 749.3	369.4
EE	306.3	182.1	8.7	0.4	89.1	20.6	5.5
IE	5 787.4	4 743.3	474.5	1.1	379.4	104.3	84.8
EL	2 406.5	465.6	915.7	421.3	243.7	332.8	27.4
ES	14 830.9	4 164.5	1 657.4	236.4	6 154.7	2 341.9	276.1
FR	22 674.2	13 861.2	747.5	143.3	3 225.7	4 332.3	364.2
HR	1 020.2	373.1	88.6	11.2	381.4	150.8	15.0
IT	9 911.5	4 363.1	678.2	86.2	2 455.1	2 136.0	192.9
CY	200.8	39.2	26.8	24.2	76.6	32.5	1.5
LV	474.6	298.1	8.4	1.3	96.6	61.4	8.9
LT	900.1	576.5	6.5	1.7	201.1	90.7	23.6
LU	167.7	143.2	0.9	0.5	18.2	1.2	3.7
HU	2 483.8	525.4	120.4	9.2	793.2	976.1	59.4
MT	41.7	11.8	1.2	0.4	17.5	9.2	1.6
NL	6 711.5	2 776.6	113.0	35.3	2 496.4	1 175.4	114.8
AT	2 517.2	1 434.0	39.8	8.1	792.1	178.5	64.8
PL	10 377.2	4 406.2	26.1	10.7	3 656.9	2 061.7	215.6
PT	2 206.0	1 029.9	222.0	42.1	458.8	403.1	50.2
RO	5 444.2	1 667.2	841.2	124.1	1 372.4	962.6	476.7
SI	518.5	331.7	13.8	3.5	92.3	58.7	18.5
SK	668.3	343.4	39.5	1.1	143.6	135.2	5.6
FI	1 121.1	656.1	12.6	0.5	328.4	98.2	25.3
SE	1 751.9	1 074.7	56.5	0.0	370.1	156.9	93.6
UK	13 308.4	7 118.3	3 102.8	9.0	1 113.1	1 729.4	235.9
IS	161.0	55.6	46.3	0.1	9.4	5.7	43.8
NO	1 229.3	603.0	230.8	6.8	195.1	164.2	29.4
CH	1 793.8	1 164.0	43.4	8.7	420.9	88.8	68.0
ME	118.4	67.8	22.9	3.6	12.7	8.0	3.5

Source: Eurostat, Farm structure survey

Figure 2.3: Livestock units, 2010
(% share of total livestock units in the EU-28)



Source: Eurostat, Farm structure survey

Agricultural labour force

According to the EU's labour force survey, agriculture, forestry and fishing employed 11.3 million persons aged over 15 in the EU-28 in 2010 (of which 1.1 million were over the age of 65), the equivalent of 5.2 % of all those employed. The agricultural census estimated that 25.5 million people worked regularly in agriculture, of which 23.5 million people were either the holder or members of the holder's family. After taking into account the amount of time actually worked and converting this into equivalents of full-time work (measured as annual work units), the census estimated that the equivalent of 9.9 million people worked full-time on farms in 2010 (see Table 2.9 overleaf). The agricultural labour force (in full-time labour equivalents) was highest in Poland (19.1 % of the EU-28 total), Romania (16.2 %) and Italy (9.6 %).

Farming was predominantly a family activity in the EU-28; about three quarters (77.8 %) of the labour input in agriculture came from the holder or members of his/her family in 2010. In Malta, Croatia, Ireland and Poland, family labour accounted for over 90 % of the volume of work carried out in agriculture (see Figure 2.4). By contrast, there was a small number of countries for whom non-family labour accounted for a majority of the labour force in 2010:

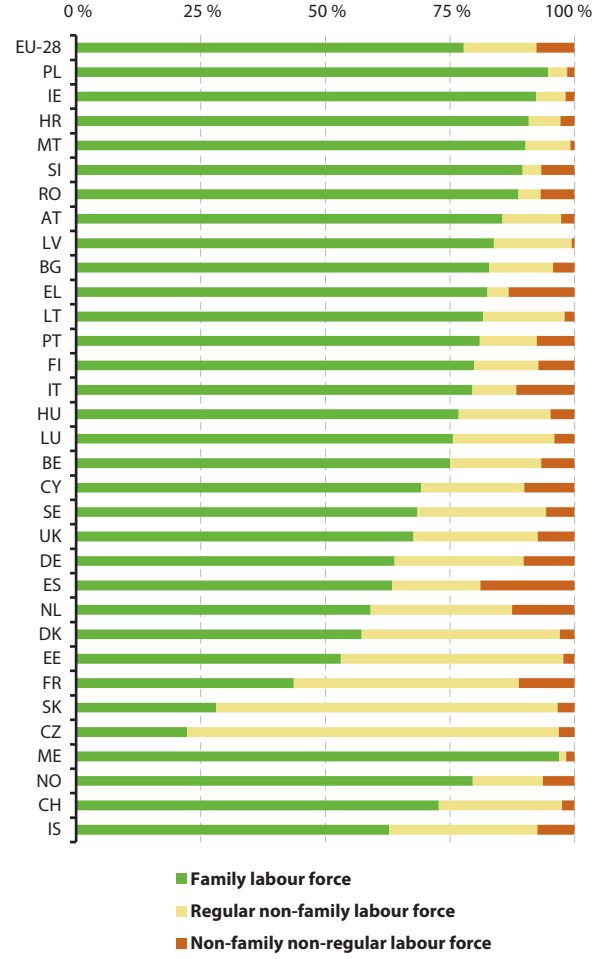
Table 2.9: Farm labour force, 2010

	Family labour force	Regular non-family labour force	Family labour force	Regular non-family labour force	Non-family, non-regular labour force	Labour force directly employed by the holding
	(1 000 persons)		(1 000 annual work units)			
EU-28	23 503.5	1 970.7	7 735.9	1 447.1	762.8	9 945.8
BE	66.5	14.4	46.2	11.3	4.1	61.6
BG	681.5	57.4	336.8	52.3	17.4	406.5
CZ	43.0	89.8	24.0	80.6	3.4	108.0
DK	56.9	23.2	30.0	20.8	1.5	52.3
DE	577.4	172.4	348.6	141.0	55.8	545.5
EE	39.4	12.9	13.3	11.2	0.6	25.1
IE	255.6	16.4	152.6	9.8	3.0	165.4
EL	1 186.5	26.2	354.4	18.3	56.8	429.5
ES	1 951.8	275.3	563.7	157.2	168.1	889.0
FR	568.4	446.4	340.7	351.8	87.2	779.7
HR	499.4	14.3	167.6	11.7	5.2	184.5
IT	3 229.6	163.2	758.4	84.1	111.3	953.8
CY	77.7	4.3	12.9	3.8	1.9	18.6
LV	163.6	17.4	71.4	13.3	0.5	85.2
LT	338.2	27.9	119.9	24.0	3.0	146.8
LU	4.1	0.9	2.8	0.8	0.2	3.7
HU	1 052.8	90.7	325.1	77.9	20.5	423.5
MT	17.6	0.9	4.4	0.4	0.0	4.9
NL	147.9	63.7	95.6	45.9	20.3	161.7
AT	319.2	27.1	97.8	13.4	3.1	114.3
PL	3 716.1	86.5	1 795.6	73.8	27.8	1 897.2
PT	657.8	50.3	294.4	41.4	27.6	363.4
RO	7 051.3	105.6	1 428.7	72.3	109.3	1 610.3
SI	205.2	3.3	68.7	2.8	5.1	76.7
SK	46.1	44.9	15.8	38.4	1.9	56.1
FI	111.2	14.1	47.7	7.7	4.3	59.7
SE	119.8	21.7	38.9	14.7	3.3	56.9
UK	319.1	99.6	180.3	66.4	19.6	266.3
IS	4.0	1.7	2.6	1.2	0.3	4.2
NO	107.9	17.4	36.9	6.5	3.0	46.4
CH	121.9	44.5	69.9	23.7	2.4	96.0
ME	98.2	0.8	46.4	0.7	0.8	47.9

Source: Eurostat (online data code: ef_olfftecs)

these included France (56.3 %), Slovakia (71.9 %) and the Czech Republic (77.7 %). Even in some countries where family labour provided a majority of labour, there were relatively large volumes of non-family labour: in particular, non-regular (seasonal) labour (often for picking perishable crops) represented between 10 % and 20 % of the total labour input within agriculture in Cyprus, Germany, France, Italy, the Netherlands, Greece and Spain.

Figure 2.4: Farm labour force, by type of labour, 2010
(% share of farm labour force, by annual work units)



Source: Eurostat (online data code: ef_olfftecs)

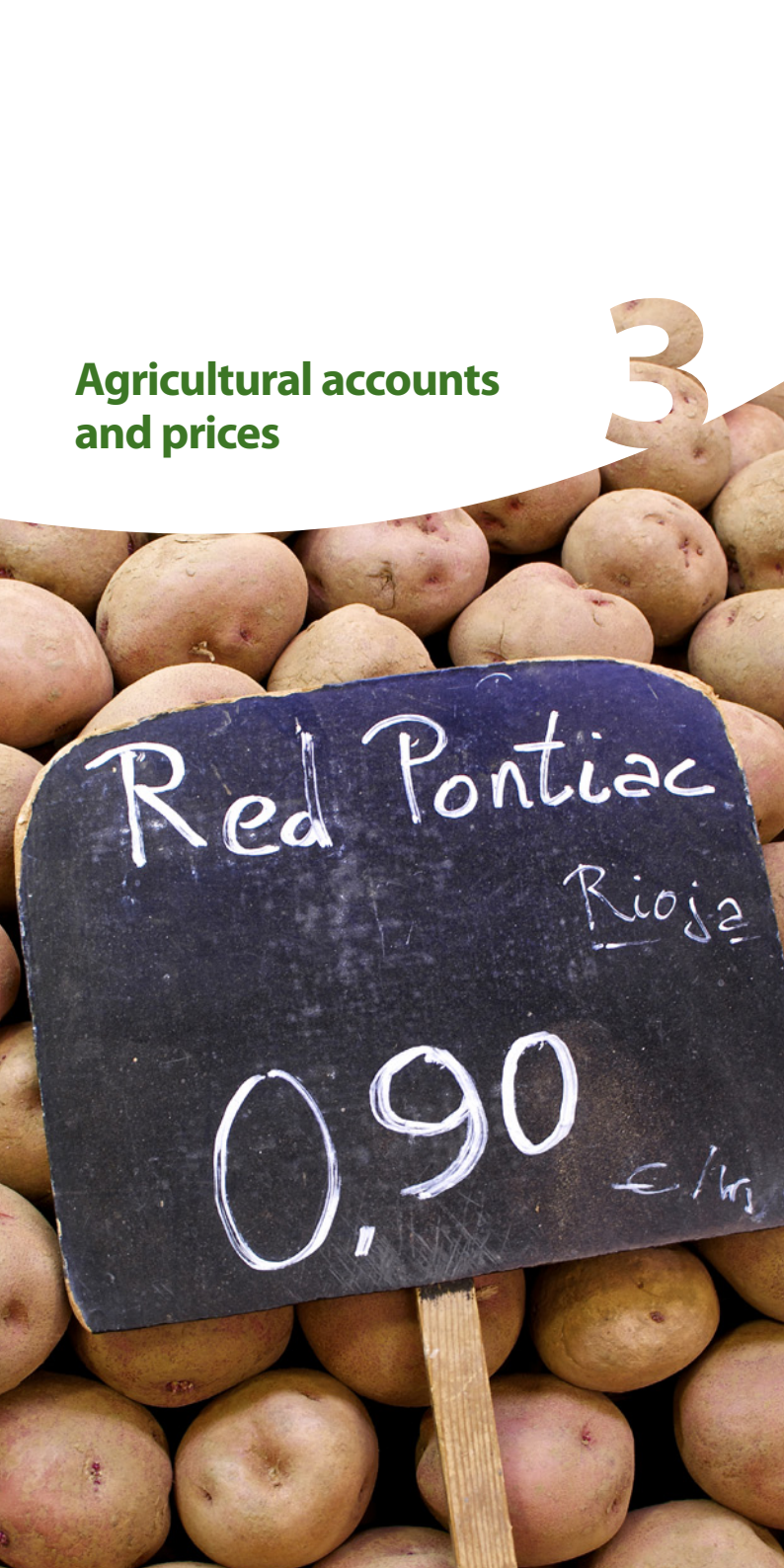
DATA SOURCES AND AVAILABILITY

The legal basis for the farm structure survey (FSS) is Regulation 1166/2008 of 19 November 2008. EU Member States collect information from individual agricultural holdings and, observing strict rules of confidentiality, data are forwarded to Eurostat. The information collected in the farm structure survey covers land use, livestock numbers, rural development, management and farm labour input (including the age, gender and relationship to the holder of the agricultural holding). The survey data can be aggregated by different geographic levels (for Member States, regions, and also districts). The data can also be arranged by size class, area status, legal status of the holding, objective zone and farm type.

The basic unit underlying the farm structure survey is the agricultural holding: a technical-economic unit, under single management, engaged in agricultural production. Although the thresholds for defining an agricultural holding can be different between countries (as high as five hectares of UAA in some cases), the survey covers 98 % of the UAA and the livestock of each country.

Agricultural accounts and prices

3



One of the principal objectives of the Common Agricultural Policy (CAP) is to provide farmers with a reasonable standard of living. Although this concept is not defined explicitly within the CAP, a range of indicators — including those on income development from farming activities — may be used to determine the progress being made towards this objective. Economic accounts for agriculture (EAA) provide an insight, among others, into:

- the economic viability of agriculture;
- the income received by farmers;
- the structure and composition of agricultural production and intermediate consumption;
- relationships between prices and quantities of both inputs and outputs.

A 2003 reform of the CAP introduced a new system of direct payments, known as the single payment scheme. Its goal was to ensure a safety net for farmers in the form of basic income support, decoupled from production, while stabilising farmer's incomes from their sales to market (which are subject to volatility). To maximise their profits, farmers were encouraged to respond to market signals — producing goods that consumers want — and to look after the farmland while fulfilling environmental, animal welfare and food safety standards.

The European Commission launched a public debate on the future of the CAP during 2010. Its outcome, coupled with input from the European Council and Parliament, led the Commission to present a Communication in November 2010, titled 'The CAP towards 2020: meeting the food, natural resources and territorial challenges of the future' (COM(2010) 672 final). This was followed, in October 2011, by a set of legal proposals concerning the future of the CAP. After almost two years of negotiations, a political agreement was reached on 26 June 2013, and these new proposals will come into effect as of 1 January 2014. With a budget of EUR 303.1 billion foreseen for the period 2014–20, direct payments will continue to form a significant part of the European Union's (EU's) agricultural and rural development budget.

Agricultural output

The economic accounts for agriculture show that the total output of the agricultural industry (comprising the output values of crops and animals, agricultural services and the goods and services produced from inseparable non-agricultural secondary activities) in the EU-28 in 2012 was an estimated EUR 408.4 billion at basic prices. The equivalent of 60.7 % of the value of agricultural output generated was spent on intermediate consumption (input goods and services). The residual gross value added at basic prices was the equivalent of 39.3 % of the value of total output in 2012 or EUR 160.6 billion.

Table 3.1: Output value of the agricultural industry at producer prices, 2005 and 2010–12

	Value (EUR million)				Share of EU-28 (%)	
	2005	2010	2011	2012	2005	2012
EU-28	309 913	357 158	390 591	*404 372*	100.0	*100.0*
BE	6 548	7 577	7 689	*8 473*	2.1	*2.1*
BG	3 356	3 743	4 261	*4 354*	1.1	*1.1*
CZ	3 424	4 009	4 781	*4 802*	1.1	*1.2*
DK	7 865	9 729	10 541	*11 092*	2.5	*2.7*
DE	38 946	46 087	52 306	*55 723*	12.6	*13.8*
EE	521	664	807	*882*	0.2	*0.2*
IE	5 307	5 670	6 643	*6 965*	1.7	*1.7*
EL	10 641	10 303	10 737	*10 579*	3.4	*2.6*
ES	35 407	39 651	40 738	*42 634*	11.4	*10.5*
FR	56 221	66 671	71 113	*75 094*	18.1	*18.6*
HR	2 244	2 552	2 531	*2 427*	0.7	*0.6*
IT	41 897	43 830	47 199	*48 173*	13.5	*11.9*
CY	654	686	706	*720*	0.2	*0.2*
LV	693	928	1 070	*1 295*	0.2	*0.3*
LT	1 433	1 894	2 408	*2 671*	0.5	*0.7*
LU	292	326	349	*395*	0.1	*0.1*
HU	5 702	6 052	7 665	*7 463*	1.8	*1.8*
MT	110	123	126	*124*	0.0	*0.0*
NL	20 302	24 796	25 440	*26 440*	6.6	*6.5*
AT	5 146	6 222	7 125	*7 247*	1.7	*1.8*
PL	14 119	18 509	21 711	*22 659*	4.6	*5.6*
PT	5 498	6 099	6 028	*6 135*	1.8	*1.5*
RO	12 667	15 244	18 048	*14 551*	4.1	*3.6*
SI	983	1 098	1 221	*1 201*	0.3	*0.3*
SK	1 625	1 825	2 246	*2 167*	0.5	*0.5*
FI	3 192	3 893	4 416	*4 685*	1.0	*1.2*
SE	4 286	5 223	5 715	*5 863*	1.4	*1.4*
UK	20 834	23 752	26 969	*29 557*	6.7	*7.3*
NO	3 133	3 859	4 001	*4 326*	-	-
CH	6 507	7 238	8 171	*8 210*	-	-

Source: Eurostat (online data code: aact_eaa01)

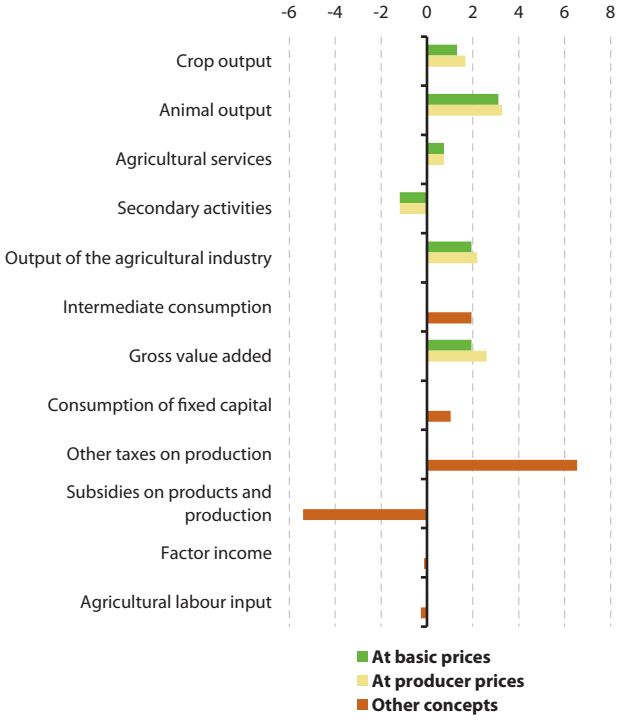
Final output

The output value of the EU-28's agricultural industry at producer prices (therefore excluding subsidies, less taxes on products) was an estimated EUR 404.4 billion in 2012. France was the largest agricultural producer in the EU-28 (EUR 75.1 billion or 18.6 % of the EU-28 total), followed by Germany (13.8 %), Italy (11.9 %) and Spain (10.5 %); relative to its size, the Netherlands accounted for quite a high share of the EU-28's agricultural output (6.5 %).

During the period 2005–12, the value of agricultural output rose in all of the EU Member States other than Greece (where output fluctuated but was largely unchanged). The highest increases in output value (in absolute terms) were recorded for the two

Figure 3.1: Real change in the main components of the agricultural industry, EU-28, 2011–12 (1)

(%)



(1) Estimates.

Source: Eurostat (online data codes: aact_eaa04 and aact_ali01)

largest producers, namely France and Germany, output rising by EUR 18.9 billion and EUR 16.8 billion respectively. There were also relatively large increases in agricultural output in the United Kingdom, Poland, Spain, Italy and the Netherlands.

The biggest relative gains during the period 2005–12 in agricultural output were recorded for Germany, Poland and the United Kingdom: the highest increase being in Germany (its share in the EU-28 total rising by 1.2 percentage points). At the other end of the range, the relative weight of Greece, Spain and Italy fell; the most pronounced reduction was recorded for Italy (its share of the EU-28 total falling by 1.6 percentage points).

Table 3.2 shows that the main components of the EU-28's agricultural industry in 2012 were crop output (51.8 % of the total) and animal output (40.8 %); agricultural services (4.7 %) and inseparable secondary activities — generally the processing of agricultural products — provided the residual shares (4.7 % and 2.8 %). The agricultural products accounting for the highest share of output value in the EU-28's agricultural industry in 2012 were cereals (14.4 %) and milk (12.7 %), while pig and cattle output also accounted for relatively large shares (9.3 % and 8.2 %). More information on the production of agricultural products is provided Chapter 4.

Table 3.2 also shows the annual change in EU-28 agricultural output in volume terms between 2011 and 2012 (-3.1 %). The volume of crop output fell by 5.3 %, with the biggest rates of decline being recorded for wine (-15.5 %) and potatoes (-14.0%). Output volumes fell for each of the remaining crops detailed in the table — with the exception of olive oil (+5.9 %) — including the three crop products with the highest value of output, namely, cereals (-7.0%), fresh vegetables (-2.8 %) and fruits (-7.2 %).

The volume of animal output fell by 0.5 % in the EU-28 between 2011 and 2012. There was a reduction in the volume of sheep and goat production (-2.2 %), cattle production (-2.1 %) and pig production (-1.8 %), although poultry production rose by 2.6 %. There was little change in the volume of milk production in the EU-28 in 2012 (+0.3 %), while there was a reduction of 1.6 % in the volume of egg production.

The sharpest increases in the real value of crop products between 2011 and 2012 were recorded for olive oil (7.3 %), fresh vegetables (3.6 %) and cereals (2.9 %). The highest increases among animal products were recorded for eggs (28.3 %), pig (7.7 %) and cattle production (6.2 %). The marked increase in the real value of eggs between 2011 and 2012 resulted from a spike in prices during the spring of 2012 when eggs were in short supply.

Table 3.2: Real change in the main components of agricultural output, EU-28, 2011–12

(%)

	Volume (at producer prices)	Real value (at producer prices)	Real value (at basic prices)	Share in output value of the agricultural industry (at producer prices, 2012)
	Annual change, 2011–12			
Agricultural industry	*-3.1*	*2.2*	*1.9*	100.0
Crop output	*-5.3*	*1.7*	*1.3*	*51.8*
Cereals	*-7.0*	*2.9*	*2.5*	*14.4*
Oilseeds	*-7.5*	*1.0*	*0.9*	*3.1*
Sugar beet	*-3.2*	*-3.4*	*-4.7*	*1.0*
Fresh vegetables	*-2.8*	*3.6*	*3.5*	*6.9*
Plants and flowers	*-0.7*	*1.0*	*1.0*	*5.2*
Potatoes	*-14.0*	*-4.3*	*-4.6*	*2.3*
Fruits	*-7.2*	*-1.2*	*-1.7*	*5.9*
Wine	*-15.5*	*-8.3*	*-8.3*	*3.4*
Olive oil	*5.9*	*7.3*	*7.2*	*1.0*
Animal output	*-0.5*	*3.3*	*3.1*	*40.8*
Cattle	*-2.1*	*6.2*	*5.3*	*8.2*
Pigs	*-1.8*	*7.7*	*7.8*	*9.3*
Sheep and goats	*-2.2*	*-3.1*	*-3.3*	*1.4*
Poultry	*2.6*	*4.9*	*5.0*	*5.1*
Milk	*0.3*	*-4.5*	*-4.6*	*12.7*
Eggs	*-1.6*	*28.3*	*28.3*	*2.4*
Agricultural services	*0.1*	*0.7*	*0.7*	*4.7*
Secondary activities	*-2.5*	*-1.2*	*-1.2*	*2.8*

Source: Eurostat (online data codes: aact_eaa01, aact_eaa04 and aact_eaa05)

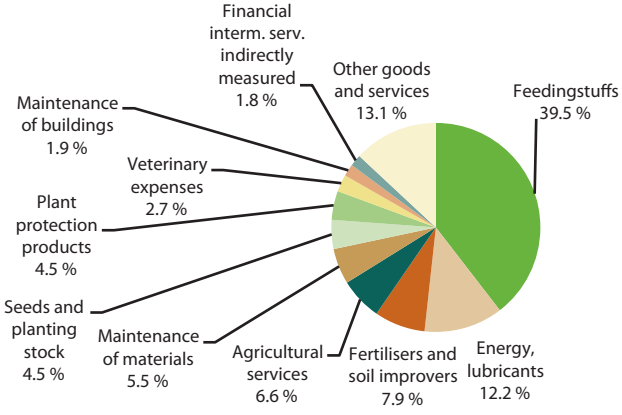
Intermediate consumption

Intermediate consumption covers purchases made by farmers for raw and auxiliary materials that are used as inputs for crop an animal production; it also includes expenditure on veterinary services, repairs and maintenance, and other services. Intermediate consumption within the EU-28's agricultural industry in 2012 was valued at EUR 247.8 billion at basic prices.

Feedingstuffs for animals accounted for by far the highest share (39.5 %) of total intermediate inputs within the EU-28's agricultural activity in 2012, valued at more than three times the share of energy and lubricants (12.2 %) — the latter are used for both animal and crop production. Fertilisers and soil improvers (7.9 %) accounted for the highest share of intermediate inputs among those inputs used exclusively for crop production (see Figure 3.2).

The relative share of intermediate consumption in production value has generally risen during recent years (see Table 3.3). Three main intermediate inputs are used for the production of crops — seeds and plantings, fertilisers, and plant protection products — together they accounted for 19.7 % of the production value of crops in the EU-28 in 2012 (1.6 percentage points higher than in 2005). The two main intermediate inputs for animal production — feedstuffs and veterinary expenses — together accounted for 62.8 % of the EU-28's production value for animals in 2012. This was fully 11.8 percentage points higher than in 2005, reflecting the upward development of feed prices (which peaked in 2011).

Figure 3.2: Intermediate inputs consumed by the agricultural industry at basic prices, EU-28, 2012
(% share of total intermediate inputs)



Source: Eurostat (online data code: aact_eaa01)

Table 3.3: Share of intermediate consumption in production at basic prices, 2005 and 2010–12

(%)

	Seeds, fertilisers and plant protection products in crop production				Feedingstuffs and veterinary expenses in animal production			
	2005	2010	2011	2012	2005	2010	2011	2012
EU-28	18.1	18.9	19.7	*19.7*	51.0	60.5	63.1	*62.8*
BE	23.0	23.0	24.6	*21.8*	60.9	67.6	73.7	*71.7*
BG	13.7	13.7	16.5	*15.9*	52.2	74.9	79.1	*78.7*
CZ	24.1	24.2	22.5	*22.2*	67.3	76.8	70.1	*72.8*
DK	25.1	25.1	24.6	*22.5*	52.0	54.0	55.9	*58.1*
DE	20.2	20.1	20.0	*19.0*	57.1	69.0	73.6	*72.7*
EE	12.8	13.4	20.8	*17.1*	70.7	59.7	62.5	*65.3*
IE	36.6	36.6	36.2	*35.8*	45.6	55.9	54.3	*56.9*
EL	9.9	11.6	10.5	*10.8*	52.7	65.9	78.3	*79.3*
ES	11.5	13.0	12.5	*13.2*	51.7	69.0	73.0	*71.4*
FR	21.4	24.8	23.2	*21.8*	53.2	65.2	64.7	*66.3*
HR	25.3	28.1	24.7	*25.6*	51.1	61.5	69.1	*74.4*
IT	11.2	11.8	13.8	*14.5*	51.7	58.4	58.7	*55.5*
CY	15.6	15.6	15.4	*15.7*	53.1	56.9	60.2	*59.4*
LV	25.8	29.0	32.0	*29.3*	55.7	59.2	62.2	*61.4*
LT	34.3	41.4	26.2	*23.0*	53.1	62.1	66.9	*69.0*
LU	20.3	20.3	24.6	*18.6*	70.0	81.5	76.4	*89.9*
HU	24.4	26.8	24.9	*27.7*	54.4	66.9	68.4	*69.5*
MT	11.0	12.1	12.9	*13.8*	48.6	47.9	52.0	*50.3*
NL	16.3	16.4	19.5	*18.4*	43.6	50.6	56.8	*56.4*
AT	16.2	16.2	14.6	*15.5*	45.3	50.2	53.7	*56.7*
PL	18.9	21.9	20.8	*21.2*	44.3	49.1	58.9	*59.6*
PT	12.2	12.9	13.4	*13.7*	65.3	78.9	80.2	*79.7*
RO	14.2	14.2	15.8	*17.7*	67.5	89.7	83.9	*78.7*
SI	15.4	16.5	16.6	*18.7*	64.2	77.8	79.1	*77.6*
SK	31.9	34.8	28.7	*30.4*	49.8	40.1	40.1	*41.1*
FI	29.6	38.4	35.8	*37.4*	37.1	37.1	40.5	*41.9*
SE	29.0	29.2	25.7	*24.6*	38.7	49.3	52.1	*55.9*
UK	39.2	39.3	34.7	*36.3*	34.4	39.7	38.8	*38.8*
NO	19.4	20.3	21.3	*21.8*	46.8	46.8	46.4	*47.7*
CH	14.3	14.5	15.0	*15.2*	55.4	55.9	55.9	*56.1*

Source: Eurostat (online data code: aact_eaa01)

Gross value added and subsidies

Gross value added at producer prices of the EU-28's agricultural industry in 2012 was an estimated EUR 156.5 billion, while overall subsidies amounted to EUR 55.9 billion (see Table 3.4 overleaf). The highest subsidies were generally granted to those EU Member States with the highest levels of output (France, Germany, Spain and Italy). The value of subsidies received by farmers in Finland, Greece, Ireland and the Czech Republic accounted for a higher share of EU-28 subsidies than their relative weight in the output value of the EU-28's agricultural industry.

The type of subsidies provided to the EU-28's agricultural industry has changed over time as a result of successive reforms of the CAP, 'decoupling' subsidies from particular crops and moving towards a system of single farm payments. Subsidies on products in the EU-28 were valued at EUR 20.0 billion in 2005, which had fallen to EUR 4.2 billion by 2012. By contrast, other subsidies on production increased from EUR 29.7 billion in 2005 to EUR 51.7 billion by 2012.

Table 3.4: Agricultural gross value added at producer prices and subsidies, 2005 and 2010–12

(EUR million)

	Gross value added at producer prices				Overall subsidies			
	2005	2010	2011	2012	2005	2010	2011	2012
EU-28	130 212	141 161	150 807	156 549	49 749	55 981	58 149	55 935
BE	2 146	2 310	1 833	*2 443*	486	802	793	*792*
BG	1 544	1 277	1 536	*1 614*	87	545	543	*625*
CZ	970	918	1 364	*1 330*	670	1 111	1 174	*1 184*
DK	2 253	2 715	2 759	*2 969*	974	1 016	1 046	*1 019*
DE	12 920	13 967	15 282	*17 485*	6 093	7 136	7 350	*7 354*
EE	197	231	307	*342*	90	169	176	*192*
IE	1 562	1 368	1 790	*1 761*	2 225	1 726	1 896	*1 780*
EL	6 146	5 270	5 103	*4 856*	2 402	3 117	3 015	*3 102*
ES	20 345	21 646	20 766	*21 386*	6 550	6 801	6 451	*6 526*
FR	21 375	26 660	27 721	*29 912*	9 743	9 819	9 882	*9 342*
HR	883	1 007	967	*841*	273	408	369	*347*
IT	24 357	23 210	24 851	*25 187*	4 343	4 919	5 383	*5 483*
CY	332	315	325	*333*	46	40	41	*45*
LV	222	223	247	*335*	175	263	261	*276*
LT	409	502	722	*864*	228	347	355	*373*
LU	101	86	95	*113*	62	65	75	*65*
HU	1 800	1 910	2 831	*2 493*	1 088	1 358	1 577	*1 586*
MT	45	55	56	*55*	19	28	19	*19*
NL	7 751	8 621	8 038	*8 642*	801	869	1 011	*1 005*
AT	2 070	2 488	2 912	*2 805*	1 701	1 654	1 628	*1 620*
PL	5 159	6 498	7 867	*8 377*	2 120	4 309	4 688	*2 866*
PT	2 201	2 177	1 881	*1 918*	1 007	975	903	*1 033*
RO	6 003	6 450	8 023	*6 255*	549	575	1 610	*1 679*
SI	397	404	475	*426*	232	252	250	*247*
SK	382	300	485	*459*	236	495	480	*490*
FI	720	1 113	1 257	*1 319*	2 095	2 144	2 098	*2 145*
SE	1 135	1 409	1 483	*1 533*	1 022	1 029	1 105	*1 061*
UK	6 789	8 033	9 831	*10 495*	4 433	4 006	3 970	*3 680*
NO	919	1 204	1 199	*1 325*	1 208	1 379	1 461	*1 580*
CH	2 564	2 706	3 035	*2 979*	1 718	2 150	2 439	*2 514*

Source: Eurostat (online data code: aact_eaa01)

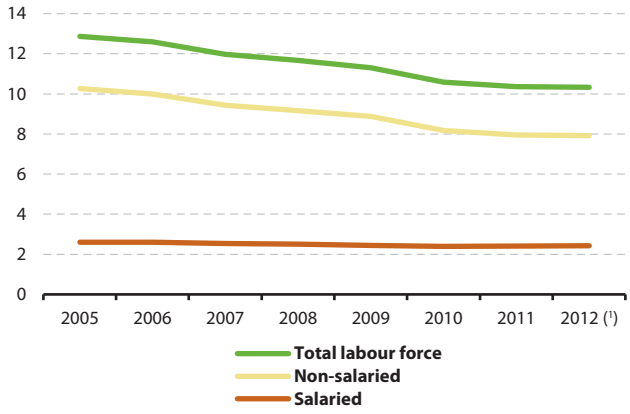
Agricultural labour input

The vast majority of the EU's farms are relatively small, family-run holdings. Often, these holdings draw on family members to provide labour (in addition, to the farm holder). Agriculture is also characterised by seasonal labour peaks (for example, those linked to harvesting), with high numbers of workers hired for relatively short periods of time. Otherwise, some farmers are occupied on a part-time basis (and they may have alternative, sometimes important sources of income) — so while there are a large number of people providing labour within agriculture, many of these will have their main employment elsewhere. For this reason, estimates are made of the volume of labour input provided in terms of full-time labour equivalents (measured in annual work units).

EU-28 agricultural labour input was estimated at 10.3 million annual work units (the equivalent of 10.3 million people working full-time) in 2012. Among the EU Member States, the highest levels of agricultural labour input were recorded for Poland (the equivalent of 2.1 million people working full-time), Romania (1.6 million AWUs) and Italy (1.2 million AWUs).

Between 2005 and 2012 there was a reduction of almost one fifth (19.7 %) in agricultural labour input in the EU-28; the steepest annual declines were posted in 2007 and 2010. The

Figure 3.3: Agricultural labour input, EU-28, 2005–12
(million annual work units)



(1) Estimates.

Source: Eurostat (online data code: aact_ali01)

overall contraction of 2.5 million annual work units was almost exclusively due to a reduction in non-salaried labour input (2.4 million annual work units or 92.6 % of the total). Although the volume of agricultural labour input from salaried persons in the EU-28 fell in successive years from 2007 to 2010, there was a slight increase in the number of annual work units for salaried persons in both 2011 and 2012.

Malta and Ireland were the only EU Member States to record an expansion in their respective agricultural labour forces between 2005 and 2012 (labour input rose overall by 19.5 % and 11.4 %

Table 3.5: Agricultural labour input, 2005 and 2010–12

	Total agricultural labour input (1 000 annual work units)				Change, 2005–12 (%)
	2005	2010	2011	2012	
EU-28	12 865.2	10 586.1	10 359.5	*10 332.2*	*-19.7*
BE	70.0	61.9	57.6	*58.1*	*-17.0*
BG	626.4	406.5	406.5	*406.5*	*-35.1*
CZ	139.2	108.8	106.2	*105.8*	*-24.0*
DK	62.9	54.1	52.1	*52.3*	*-16.9*
DE	582.6	537.5	533.0	*525.0*	*-9.9*
EE	37.8	25.4	24.9	*24.6*	*-34.9*
IE	148.6	165.6	165.6	*165.6*	*11.4*
EL	606.6	420.8	408.0	*395.7*	*-34.8*
ES	1 017.2	924.2	894.1	*881.3*	*-13.4*
FR	907.8	809.5	791.5	*774.1*	*-14.7*
HR	228.0	202.0	201.5	*197.5*	*-13.4*
IT	1 242.0	1 171.0	1 143.0	*1 151.0*	*-7.3*
CY	28.7	25.4	25.4	*25.3*	*-11.8*
LV	138.2	85.9	81.8	*80.1*	*-42.0*
LT	173.6	143.4	142.2	*141.5*	*-18.5*
LU	4.0	3.6	3.7	*3.8*	*-5.0*
HU	522.2	440.0	431.8	*440.4*	*-15.7*
MT	4.1	4.9	4.9	*4.9*	*19.5*
NL	194.1	177.7	175.2	*169.5*	*-12.7*
AT	147.2	129.5	126.4	*123.9*	*-15.8*
PL	2 291.9	2 101.3	2 101.3	*2 101.3*	*-8.3*
PT	437.3	369.9	356.8	*352.2*	*-19.5*
RO	2 596.0	1 639.0	1 565.0	*1 598.0*	*-38.4*
SI	90.0	77.0	78.0	*77.8*	*-13.6*
SK	98.8	82.6	57.4	*54.1*	*-45.2*
FI	96.2	82.1	81.2	*78.5*	*-18.4*
SE	75.6	59.5	56.7	*54.1*	*-28.4*
UK	298.1	277.1	287.7	*289.2*	*-3.0*
IS	:	4.2	4.3	*4.1*	:
NO	66.0	51.4	49.4	*47.4*	*-28.2*
CH	88.9	80.6	79.7	*78.4*	*-11.8*

Source: Eurostat (online data code: aact_ali01)

respectively). Among the five Member States that recorded reductions in agricultural labour input of less than 10 % during the period 2005–12 were two of the three countries with the highest levels of agricultural labour input — Italy and Poland; they were joined by the United Kingdom, Luxembourg and Germany. At the other end of the scale, there were eight Member States that recorded contractions in agricultural labour input between 2005 and 2012 in excess of the EU-28 average (-19.7 %). Among these, Greece, Estonia, Bulgaria and Romania reported declines of 35–38 %, while the reductions were even more pronounced in Latvia (-42.0 %) and Slovakia (-45.2 %).

Agricultural income

Income is a key measure for determining the viability of the agricultural sector. The nominal factor income of the agricultural industry (the income from selling the services of factors of production — land, labour and capital) in the EU-28 was valued at EUR 145.7 billion in basic price terms in 2012. Within agricultural accounts, income has traditionally been measured as an index, computed on the basis of the real factor income per annual work unit.

From the base year of 2005 (=100), the EU-28 index of agricultural income rose for two consecutive years, before falling back in 2008 and 2009 (at the height of the financial and economic crisis) to almost the same level as in 2005. Thereafter, the index of agricultural income rebounded, with relatively rapid growth in 2010 and 2011. Agricultural income in the EU-28 remained stable in 2012 (rising by just 0.1 % compared with the year before).

The overall pattern for the development of agricultural income in the EU-28 during the period 2005–12 can be linked to the development of the two underlying indicators that are used in the construction of the index. EU-28 real factor income for the agricultural industry fluctuated considerably but in broad terms rose relatively slowly. This higher factor income was nominally shared amongst a smaller workforce, resulting in stronger rises in average income per full-time labour equivalent.

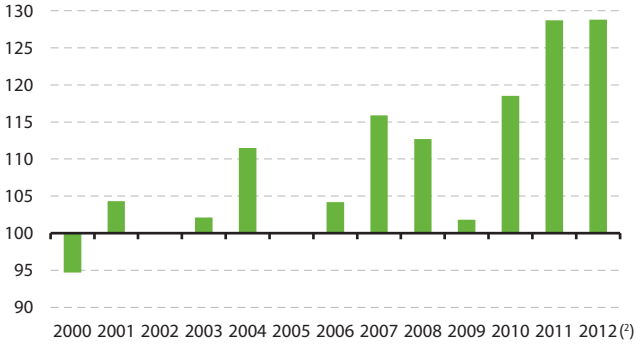
The variations in real factor income can be linked to rising commodity prices (in 2007 and again in 2010 and 2011) and the downturn in agricultural activity resulting from the financial and economic crisis (in 2008 and 2009). The biggest changes in EU-28 real factor income were recorded in 2009 and 2010, -12.6 % followed by +9.3 % and these were apparent in the overall

development of the index for agricultural income (see Figure 3.4). Otherwise, the relatively large declines in agricultural labour input recorded in 2007 and 2010 were also apparent as agricultural income increased during both of these years.

A group of five EU Member States reported that their index of agricultural income in 2012 was at a lower level than in 2005 (see Table 3.6). This group comprised Cyprus (where the biggest contraction in income was recorded, -30.7 %), Luxembourg, Malta, Ireland and Italy (where the smallest reduction was registered, at -7.4 %). In the case of Malta and Ireland the reduction in agricultural income per annual work unit could be largely attributed to an expansion in the number of annual work units, whereas in the other three Member States it could be largely attributed to a reduction in real factor income.

The index of agricultural income rose in the remaining EU Member States between 2005 and 2012. Increases were relatively small — of the magnitude 1.0–3.4 % — in Croatia, Portugal, Slovenia, Spain and Greece. By contrast, agricultural income per annual work unit rose in Estonia by 119.4 % between 2005 and 2012, and almost doubled in Slovakia (+95.9 %) and Lithuania (+81.6 %), while increases of 60–70 % were recorded in Hungary, Latvia and the Czech Republic. The rapid rise in the index for three of these five countries resulted largely from an increase in real factor incomes over the period under consideration (a pattern that was apparent for the majority of the Member States

Figure 3.4: Agricultural income, EU-28, 2000–12 (1)
(2005=100)



(1) EU-27: 2000–04.
(2) Estimates.

Source: Eurostat (online data code: aact_eaa06)

that joined the EU since 2004 — for example, Lithuania (48.0 %), Estonia (42.7 %) and Hungary (38.3 %)). However, the relatively rapid growth of agricultural income in Slovakia and Latvia during the period 2005–12 was largely the result of nominally sharing income amongst a much smaller labour force (volumes of labour input declining 45.2 % and 42.0 % respectively).

Table 3.6: Agricultural income, 2000–12

(2005=100)

	Average 2000–05	Average 2005–10	2010	2011	2012
EU-28 (1)	102.1	108.9	118.5	128.7	*128.8*
BE	106.5	114.7	126.6	104.9	*134.1*
BG	100.6	114.7	121.9	135.5	*147.3*
CZ	75.2	112.4	124.7	167.3	*169.2*
DK	101.3	96.1	115.6	128.0	*134.7*
DE	95.0	117.3	112.4	125.7	*144.4*
EE	67.1	116.7	156.3	192.3	*219.4*
IE	89.2	82.9	72.4	91.9	*83.9*
EL	110.3	106.7	113.6	105.3	*103.4*
ES	110.4	97.8	101.0	98.0	*101.5*
FR	105.7	108.9	122.4	132.1	139.0
HR	100.0	121.2	120.7	113.3	*101.0*
IT	114.2	94.7	83.0	93.7	*92.6*
CY	101.1	91.2	91.8	68.0	*69.3*
LV	66.8	118.8	131.4	136.3	*164.9*
LT	70.1	112.0	120.6	154.5	*181.6*
LU	120.2	92.9	61.9	72.9	*74.7*
HU	81.0	116.9	122.2	181.2	*164.0*
MT	100.2	96.1	93.9	82.2	*79.1*
NL	108.9	107.0	108.8	99.8	*114.7*
AT	96.9	112.2	111.4	126.9	*116.8*
PL	76.9	126.2	153.3	182.9	*157.8*
PT	104.8	98.5	104.8	92.4	*101.1*
RO	114.1	99.4	108.6	155.4	*113.3*
SI	79.9	99.6	101.4	115.2	*101.2*
SK	92.5	119.9	114.4	200.0	*195.9*
FI	94.6	107.2	122.8	123.2	*128.6*
SE	95.2	113.5	122.7	125.4	*128.5*
UK	93.6	121.5	135.0	150.7	*137.4*
NO	119.7	108.9	127.1	123.1	*137.8*
CH	101.1	102.6	102.0	104.1	*102.7*

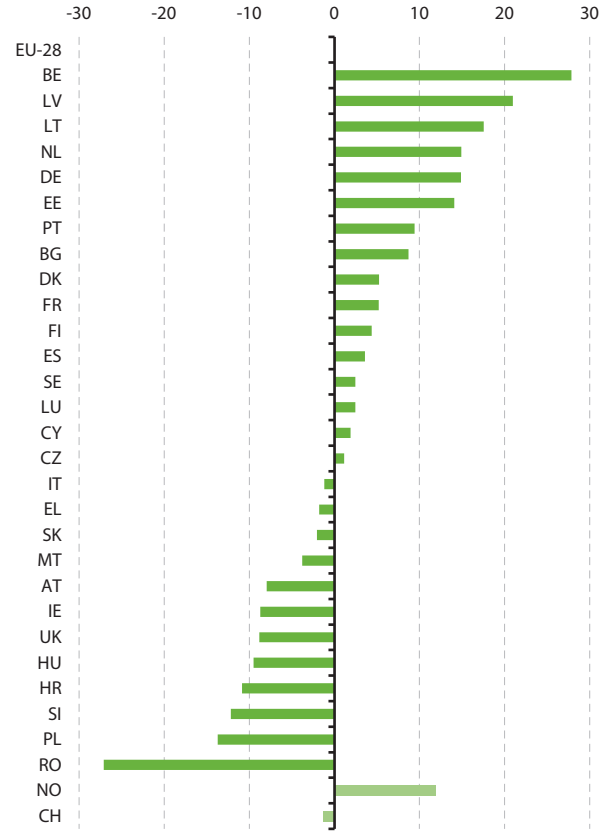
(1) EU-27: 2000–05.

Source: Eurostat (online data code: aact_eaa06)

The latest developments from 2011–12 (see Figure 3.5) show that the index of agricultural income rose by more than a quarter (27.8 %) in Belgium, while double-digit gains were also recorded in the three Baltic Member States, the Netherlands and Germany. The majority of the EU Member States saw their agricultural income vary by no more than +/-10 % from 2011–12, although there were larger reductions in Romania (-27.1 %), Croatia, Slovenia and Poland (-10 % to -14 %).

Figure 3.5: Change in agricultural income, 2011–12 (1)

(%)



(1) Estimates: except for France; EU-28: 0.1 %.

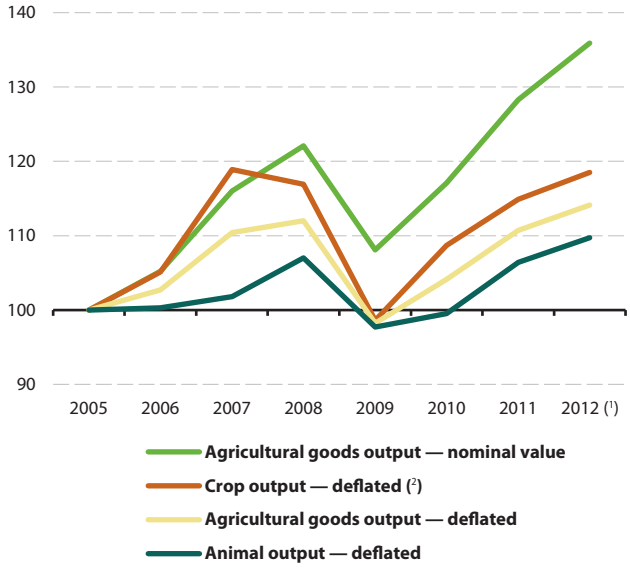
Source: Eurostat (online data code: aact_eaa06)

Price indices

EU-27 output prices for agricultural goods rose by 35.9 % in nominal terms from 2005–12. Taking into account price inflation (based on the harmonised index of consumer prices — the HICP), the real increase in (deflated) output prices for agricultural goods was 14.1 %, equivalent to an average rate of 1.9 % per annum.

Figure 3.6 shows that (deflated) output prices for agricultural goods in the EU-27 rose during the period 2005–08 by a total of 12.0 %. This was followed by a sharp reduction in prices in 2009 (-12.3 %), as the output price index fell below its base level for 2005. Thereafter, output prices for agricultural goods in the EU-27 rose by just over 6 % in real terms in both 2010 and 2011, before price increases slowed somewhat in 2012, rising by 3.1 %. Figure 3.6 also shows that prices tended to rise at a faster pace for crop output (+18.5 % over the period 2005–12, equivalent to an average of 2.5 % per annum) than for animal output (an overall increase of 9.7 %, equivalent to an average of 1.3 % per annum).

Figure 3.6: Output price indices, EU-27, 2005–12
(2005=100)

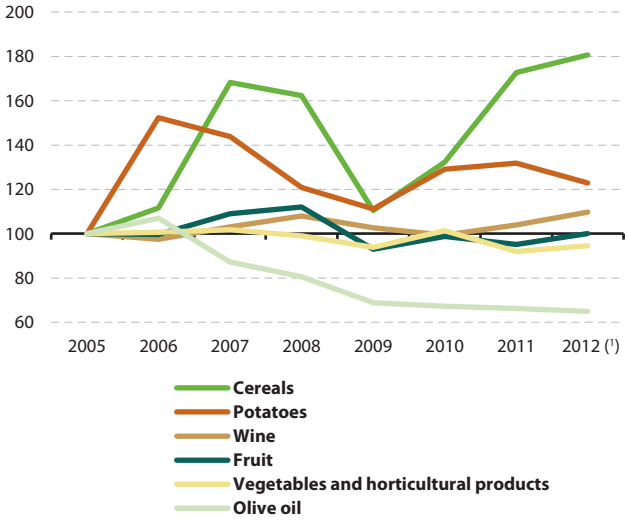


(1) Provisional.
(2) Including fruit and vegetables.
Source: Eurostat (online data code: apri_pi05_outa)

Figures 3.7 and 3.8 present a more detailed picture of deflated output price developments over the period 2005–11 for a selection of crop and animal products. Among the selected crops shown in Figure 3.7, the greatest variations in EU-27 prices and the overall highest price increases between 2005 and 2012 were recorded for cereals and potatoes. By contrast, the price of olive oil fell for six consecutive years from its relative high in 2006, while output prices for vegetables, fruits and wine remained relatively stable.

Figure 3.7: Deflated price indices for selected crop outputs, EU-27, 2005–12

(2005=100)



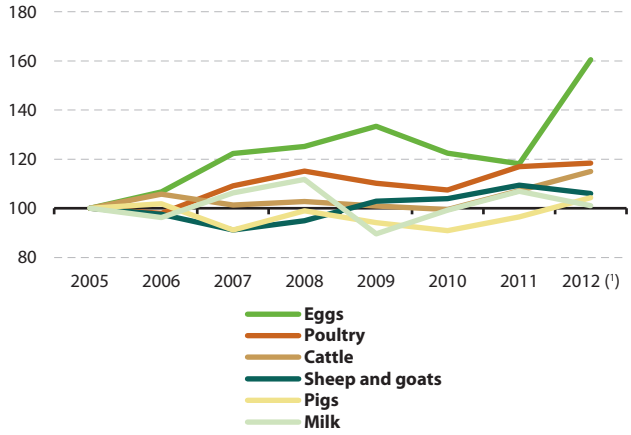
(1) Provisional: except for olive oil.

Source: Eurostat (online data code: apri_pi05_outa)

In comparison to some crops, EU-27 output price fluctuations were relatively small for animal outputs, although the price of milk fell by 19.9 % from 2008–09 and the price of eggs rose by 35.8 % from 2011–12; the spike in the price of eggs could be linked to a shortage of supply. A comparison of EU-27 deflated output prices between 2005 and 2012 reveals overall price increases of 1–6 % for milk, pigs, and sheep and goats, while prices rose faster for cattle (15.0 %) and poultry (18.4 %).

Figure 3.8: Deflated price indices for selected animal outputs, EU-27, 2005–12

(2005=100)



(1) Provisional.

Source: Eurostat (online data code: apri_pi05_outa)

Table 3.7 presents information on deflated price indices for crop and animal outputs for the period 2008–12 — thereby including the relative peak in agricultural output prices for 2008, the rapid fall in prices for 2009, and the subsequent rebound (albeit at a more modest pace) during the period 2010–12. Spain (-12.1%) and Portugal (-7.8%) were the only EU Member States to report deflated output prices for crops that were lower in 2012 than they had been in 2005; there was no change in the price of crops in Greece. Three other southern Member States — Italy, Cyprus and Malta — as well as Belgium and the Netherlands, reported deflated output prices for crops increasing at a relatively slow pace (a total increase of less than 10 % during the period 2005–12). By contrast, output prices for crops rose by 65.3 % in Hungary and by 54.6 % in the United Kingdom between 2005 and 2012, while the remaining EU Member States saw crop output prices rise within the range of 18–36 %.

Deflated prices for animal output rose at a relatively fast pace in the United Kingdom (32.4%), Ireland (20.7 %), Poland (15.3 %), Finland (15.1 %) and Denmark (13.0 %) during the period from 2005–12. The vast majority of the EU Member States registered prices for animal output fluctuating within the range of +/-10 %. Among the 10 Member States where prices for animal output fell, the most significant reductions were recorded in Slovakia (-20.2 %), while Latvia, Estonia, Croatia and the Czech Republic recorded prices falling by 11–14 %.

Table 3.7: Deflated price indices, crop and animal output, 2008–12

(2005=100)

	Crop output (1)					Animal output				
	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012
EU-27	116.9	98.6	108.7	114.9	*118.5*	107.0	97.7	99.5	106.4	*109.7*
BE	105.0	91.6	103.2	94.8	109.4	102.7	92.2	93.6	97.9	102.0
BG	126.3	93.4	104.1	116.4	128.2	101.0	86.2	87.2	94.1	95.3
CZ	137.9	92.7	101.0	125.4	127.0	92.2	77.9	80.4	84.6	86.1
DK	136.4	106.5	107.3	126.3	128.8	103.2	89.1	97.9	106.0	113.0
DE	126.4	97.4	115.6	128.7	135.4	109.9	91.8	100.1	109.4	110.0
EE	117.4	86.7	106.9	132.1	134.4	95.1	75.3	86.7	93.2	88.4
IE	127.4	113.5	116.6	120.1	133.5	109.4	92.0	104.5	119.8	120.7
EL	105.6	100.8	113.9	108.5	100.0	98.7	98.0	94.5	93.3	92.9
ES	94.9	79.6	87.9	81.2	87.9	99.2	95.3	91.9	96.7	103.0
FR	124.2	104.6	114.8	126.2	131.3	107.5	97.7	97.9	104.3	108.6
HR	107.9	93.8	102.8	106.5	118.1	91.5	86.7	81.6	87.1	87.9
IT	115.9	100.9	102.4	106.4	109.1	105.3	101.8	99.2	106.2	110.0
CY	125.2	107.5	108.9	104.7	108.3	113.8	101.3	97.9	94.9	92.9
LV	118.0	90.6	113.3	133.5	129.4	93.3	70.8	82.0	88.9	88.8
LT	133.2	88.4	109.8	134.2	121.8	102.6	81.9	90.4	98.4	97.1
LU	104.0	94.1	105.0	111.6	124.1	108.1	86.4	90.1	94.7	93.8
HU	122.5	102.5	125.9	145.4	165.3	102.3	93.8	91.2	101.2	106.0
MT	104.5	111.6	100.1	92.4	102.0	102.8	104.3	102.4	106.1	110.2
NL	105.6	96.7	107.8	105.8	105.1	110.5	93.4	100.8	109.0	110.4
AT	108.9	*98.5*	122.9	121.8	*124.0*	113.1	*97.5*	98.7	104.9	*107.1*
PL	124.8	99.9	121.6	141.2	132.7	101.5	100.8	97.4	107.8	115.3
PT	101.9	96.4	103.1	94.6	92.2	104.8	99.9	99.8	101.1	105.7
RO	133.8	109.3	119.2	131.3	136.1	98.1	105.2	98.9	101.8	108.2
SI	138.6	111.3	112.4	116.8	117.9	106.3	93.1	92.4	100.2	101.6
SK	120.5	81.3	104.9	123.0	129.4	94.6	74.5	74.8	79.6	79.8
FI	123.9	101.4	104.7	120.9	121.5	107.4	99.0	104.0	111.3	*115.1*
SE	128.2	108.3	124.7	131.3	130.8	117.6	105.0	111.0	111.7	108.9
UK	141.7	118.5	127.3	148.2	154.6	125.4	125.1	123.0	128.9	132.4

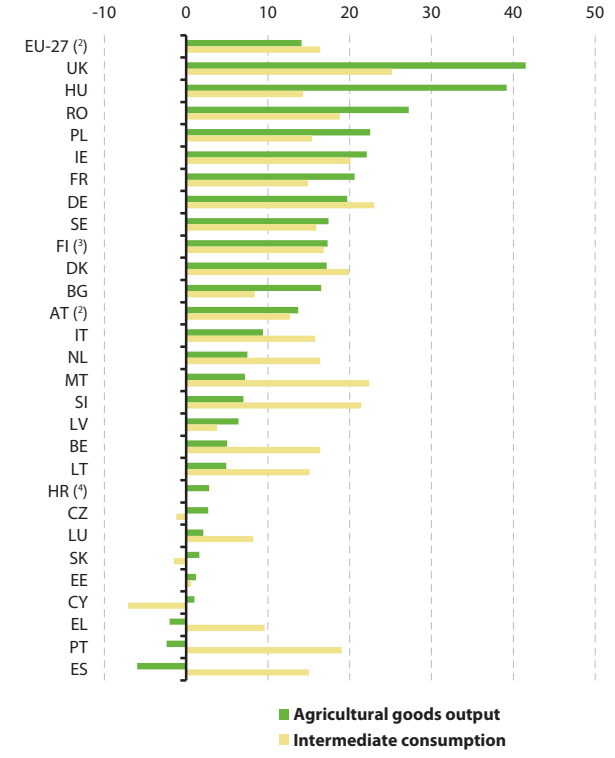
(1) Including fruit and vegetables.

Source: Eurostat (online data code: apri_pi05_outa)

Figure 3.9 provides a comparison between deflated price indices for intermediate consumption and the output of agricultural goods. Deflated prices for intermediate consumption in the EU-27's agricultural industry rose by 16.4 % between 2005 and 2012, while the output price index for agricultural goods rose by 14.1 % (over the same period). However, there does not appear to be any robust link between the development of these two indices across the EU Member States, despite some countries recording relatively high price increases for both intermediate consumption and the output of agricultural goods (the United Kingdom, Romania and Ireland) and others reporting relatively low price increases or falling prices for both intermediate consumption and the output of agricultural goods (Croatia, the Czech Republic, Slovakia, Estonia and Cyprus).

Figure 3.9: Change in deflated price indices for the agricultural industry, 2005–12 (1)

(%)



(1) Ranked on agricultural goods output.
(2) Provisional.
(3) Agricultural goods output: provisional.
(4) Intermediate consumption: not available.

Source: Eurostat (online data codes: apri_pi05_ina and apri_pi05_outa)

Among the crop products shown in Table 3.8 there was a much wider variation in the selling prices of main crop potatoes across the EU Member States than there was for any of the other crops — soft wheat, rape or sunflower — the price of many cereals and oilseeds is linked to commodity markets and traded futures.

There was a wider variation in selling prices for animal products across the EU Member States (see Table 3.9 overleaf); this was particularly true for chickens (1st choice) and fresh eggs. The ratio between the highest and lowest selling prices was above 6:1 for chickens (Luxembourg with the highest selling price and Portugal the lowest) and 5:1 for fresh eggs (Greece with the highest selling price and the United Kingdom the lowest).

Table 3.8: Selling prices of crop products, 2012
(EUR per 100 kg)

	Soft wheat	Rape	Sunflower	Main crop potatoes
BE	22.33	:	:	16.81
BG	20.67	46.08	43.00	19.02
CZ	20.08	47.09	41.66	11.23
DK	20.69	46.08	:	17.20
DE	:	:	:	:
EE	21.01	47.73	:	:
IE	:	:	:	:
EL	23.20	:	45.00	42.54
ES	23.91	:	50.04	24.00
FR	:	:	:	:
HR	:	:	:	:
IT	24.56	:	:	36.69
CY	:	:	:	:
LV	21.33	45.07	:	13.28
LT	21.22	45.61	:	11.39
LU	23.08	45.50	:	*57.83*
HU	20.85	48.73	46.35	15.88
MT	:	:	:	32.14
NL	22.40	43.50	:	14.60
AT	*18.44*	*44.12*	*37.42*	16.91
PL	21.38	47.34	:	10.75
PT	22.07	:	52.00	17.26
RO	20.41	41.04	41.26	28.03
SI	19.56	44.96	:	15.52
SK	19.24	48.40	44.60	21.03
FI	20.35	44.40	:	16.03
SE	21.83	44.69	:	25.52
UK	23.83	45.28	:	20.29

Source: Eurostat (online data code: apri_ap_crpouta)

Table 3.9: Selling prices of animal products, 2012
(EUR)

	Cows	Pigs (light)	Chickens (live 1st choice)	Raw cows' milk actual fat content	Fresh eggs
	(per 100 kg live weight)			(per 100 litres)	(per 100 items)
BE	201.55	:	93.75	30.11	7.46
BG	85.62	126.36	100.76	:	8.74
CZ	126.15	132.24	91.79	:	8.85
DK	115.53	108.41	91.76	34.53	7.02
DE	:	:	:	:	:
EE	:	:	:	30.07	:
IE	:	:	:	30.63	7.85
EL	151.38	207.90	154.40	45.08	18.80
ES	143.55	134.89	124.94	30.40	10.66
FR	:	:	:	:	:
HR	:	:	:	:	:
IT	:	213.13	121.60	42.26	:
CY	:	:	:	:	:
LV	89.79	127.99	:	:	8.26
LT	105.30	137.32	94.60	25.99	8.18
LU	186.70	:	375.00	31.19	16.00
HU	:	134.14	93.74	30.43	7.83
MT	:	:	127.54	49.00	9.96
NL	140.45	120.90	90.50	35.65	7.50
AT	140.52	139.29	92.36	35.34	13.73
PL	:	:	92.26	28.62	7.64
PT	188.30	:	57.19	32.00	10.03
RO	98.22	138.59	97.55	24.89	9.19
SI	118.97	206.74	109.65	30.03	10.54
SK	101.00	135.00	93.77	30.91	9.26
FI	:	:	:	44.96	7.44
SE	:	:	109.83	38.95	9.31
UK	:	132.31	:	33.62	3. 71

Source: Eurostat (online data code: apri_ap_anouta)

DATA SOURCES AND AVAILABILITY

Economic accounts for agriculture (EAA) are a satellite account of the European system of accounts (ESA 1995). They cover the agricultural products and services produced over the accounting period sold by agricultural units, held in stocks on farms, or used for further processing by agricultural producers. The concepts of the EAA are adapted to the particular nature of the agricultural industry: for example, the EAA includes not only the production of grapes and olives but also the production of wine and olive oil by agricultural producers. It includes information on intra-unit consumption of crop products used in animal feed, as well as output accounted for by own-account production of fixed capital goods and own final consumption of agricultural units.

The EEA comprises a production account, a generation of income account, an entrepreneurial income account and some elements of a capital account. For the production items, EU Member States transmit to Eurostat values at basic prices, as well as their components (values at producer prices, subsidies on products, and taxes on products).

The output of agricultural activity includes output sold (including trade in agricultural goods and services between agricultural units), changes in stocks, output for own final use (own final consumption and own-account gross fixed capital formation), output produced for further processing by agricultural producers, as well as intra-unit consumption of livestock feed products. The output of the agricultural sector is made up of the sum of the output of agricultural products and of the goods and services produced in inseparable non-agricultural secondary activities; animal and crop output are the main product categories of agricultural output.

Eurostat computes three indicators in relation to agricultural income:

- an index of real income of factors in agricultural activity per annual work unit (indicator A);
- an index of real net agricultural entrepreneurial income, per unpaid annual work unit (indicator B);
- and the net entrepreneurial income of agriculture (indicator C).

The information presented on agricultural income relates to indicator A (the real income of factors in agriculture per annual work unit). This indicator corresponds to the real (deflated) net value added at factor cost of agriculture per annual work unit. Net value added at factor cost is calculated by subtracting from the value of agricultural output at basic prices the value of intermediate consumption, the consumption of fixed capital, and adding the value of (other) subsidies less taxes on production.

Agricultural price statistics provide information on the development of producer (output) prices for agricultural products and purchaser prices for the means of agricultural production (the intermediate consumption of goods and services within the production process). Data on prices are available for single commodities and for larger aggregates in the form of absolute prices and price indices.

The index of producer prices for agricultural products is based on sales of agricultural products, while the input index (for intermediate goods and services) is based on purchases of the means of agricultural production. Prices should be recorded at points which are as close as possible to those of the transactions which the farmer actually undertakes. This means that product prices should be recorded at the first marketing stage so as to best indicate the actual producer prices received by farmers. Similarly the prices paid by farmers for their means of production should be recorded at the last marketing stage, that at which the items arrive on the farm, so as to best indicate the purchase prices paid by farmers. It is assumed, by convention, that the fertilisers and feedingstuffs purchased are used in the same production period and that there are no stocks on farm.

As regards spatial comparisons, the structure of the weights with respect to products and means of production reflect the value of the sales and purchases in each country during the base year (currently 2005=100); the weights therefore differ from one country to another.

Selling prices for a range of agricultural products are likewise recorded at the first marketing stage —often prices from the farmer to the trade (excluding transport). In most cases the selling prices collected relate to a standard quantity of 100 kilograms, while selling prices per 100 litres are used for liquids and prices per 100 items for eggs.

4

Agricultural products

There is a diverse range of natural environments, climates and farming practices across the European Union (EU), reflected in the broad array of food and drink products that are made available for human consumption and animal feed, as well as a range of inputs for non-food processes. Indeed, agricultural products form a major part of the cultural identity of the EU's people and its regions.

Statistics on agricultural products may be used to analyse developments within agricultural markets in order to help distinguish between cycles and changing production patterns; they can also be used to study how markets respond to policy actions. Agricultural product data also provide supply-side information, furthering understanding as regards price developments which are of particular interest to agricultural commodity traders and policy analysts.

4.1 Crops

The term 'crop' covers a very broad range of cultivated plants. Within each type of crop there can also be considerable diversity in terms of genetic and phenotypic (physical or biochemical) characteristics. The range and variety of crops grown across the EU reflects their heritable traits as well as plant breeders' ability to harness those traits to best respond to the myriad of topographic and climatic conditions, pests and diseases.

The statistics on crop production in this chapter are shown at an aggregated level, and have been selected from over 100 different crop products for which official statistics are collected. Production refers to the calendar year in which the harvest began, and is a function of yields and the area under cultivation.

Cereals

The harvested production of cereals (including rice) in the EU-28 was estimated to be 284.7 million tonnes in 2012. This represented about one ninth of global cereals production (based on estimates made by the United Nations' Food and Agriculture Organization), making the EU one of the world's biggest producers of cereals. Nevertheless, EU-28 production of cereals in 2012 was an estimated 10.0 million tonnes less than in 2011 and 35.8 million tonnes (or 11.2 %) less than the peak production level that was recorded in 2008 (see Figure 4.1).

Figure 4.1: Production of cereals, EU-28, 2006–12
(1 000 tonnes)

Source: Eurostat (online data code: apro_cpp_crop)

Table 4.1: Production of cereals, 2012
(1 000 tonnes)

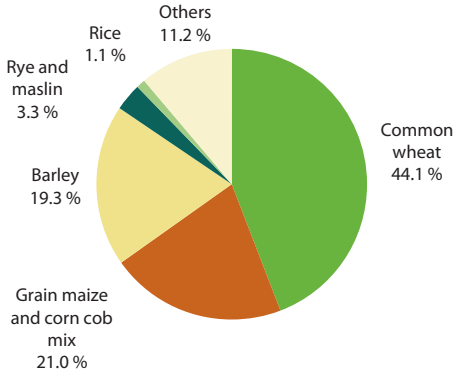
	Total (including rice)	Common wheat	Barley	Grain maize and corn cob mix	Rye and maslin
EU-28	*284 687*	125 660	54 901	59 916	9 038
BE	3 012	1 835	364	734	3
BG	6 996	4 405	662	1 718	22
CZ	6 596	3 519	1 617	928	148
DK	9 460	4 525	4 059	75	384
DE	45 397	22 352	10 391	5 515	3 878
EE	994	485	342	-	57
IE	1 915	618	1 152	0	0
EL	4 284	478	326	2 010	28
ES	17 293	4 650	5 977	4 115	256
FR	68 458	35 541	11 348	15 614	160
HR	2 729	991	235	1 341	2
IT	*19 330*	3 498	960	8 195	*15*
CY	74	25	48	-	0
LV	2 125	1 540	249	-	124
LT	4 657	2 999	742	79	157
LU	153	79	38	2	6
HU	10 310	3 927	996	4 742	78
MT	0	-	-	-	-
NL	1 775	1 295	203	245	9
AT	4 876	1 232	663	2 351	219
PL	28 544	8 608	4 180	3 996	3 163
PT	1 178	47	21	832	18
RO	12 621	5 096	971	5 949	19
SI	570	188	85	272	3
SK	3 036	1 247	471	1 170	49
FI	3 687	909	1 578	0	66
SE	5 106	2 313	1 705	11	140
UK	19 515	13 261	5 522	23	33
IS	16	0	15	-	0
LI	:	:	:	:	:
NO	1 070	235	550	:	5
CH	922	550	185	149	11

Source: Eurostat (online data code: apro_cpp_crop)

Common wheat, barley and grain maize and corn cob mix account for a high share (84.5 % in 2012) of the cereals produced in the EU-28 (see Figure 4.2). The decline in the EU-28's total cereals production in 2012 largely reflected lower production levels of grain maize (down 10.7 million tonnes to 59.9 million tonnes) and of common wheat (down 5.5 million tonnes to 125.7 million tonnes). However, the level of production rose for some types of cereal: the EU-28's production of barley in 2012 was 3.0 million tonnes higher than in 2011 (at 54.9 million tonnes) and the production level of rye was 2.2 million tonnes higher (at 9.3 million tonnes) — see Figure 4.3.

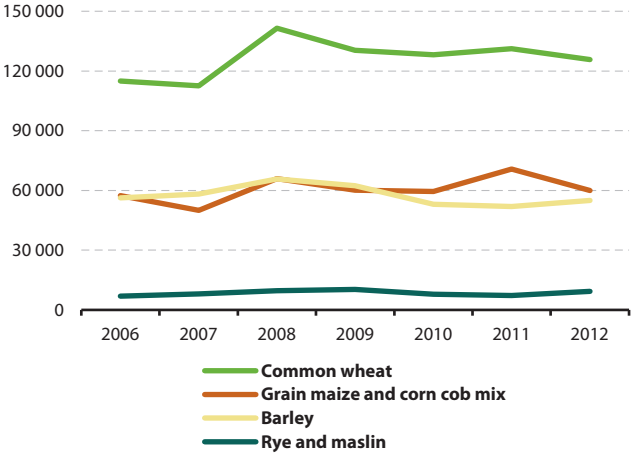
France produced about one quarter (24.1 %) of the EU-28's cereal production in 2012. Germany (16.0 %) and Poland (10.0 %) together contributed just over a quarter of the EU total, while the United Kingdom was the next largest cereal producer (accounting for 6.9 % of the EU-28's output). Among the EU Member States, France was the largest producer of common wheat, barley and grain maize, and corn cob mix in 2012 (see Figure 4.4). In contrast to the overall decline in EU-28 cereals production in 2012, the level of cereals' production rose in France by 4.6 million tonnes. The largest declines in cereal production between 2011 and 2012 were recorded for Romania (a reduction of 8.2 million tonnes, principally for grain maize and corn cob mix), Spain (down 4.8 million tonnes) and Hungary (down 3.4 million tonnes), where severe drought and/or winterkill affected yields.

Figure 4.2: Production of cereals, EU-28, 2012
(%, based on tonnes)



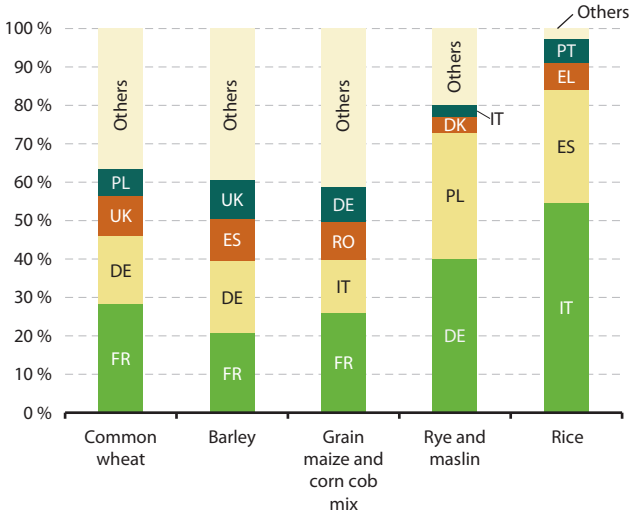
Source: Eurostat (online data code: apro_cpp_crop)

Figure 4.3: Production of cereals, EU-28, 2006–12
(1 000 tonnes)



Source: Eurostat (online data code: apro_cpp_crop)

Figure 4.4: Production of cereals, 2012
(% share of EU-28 total)



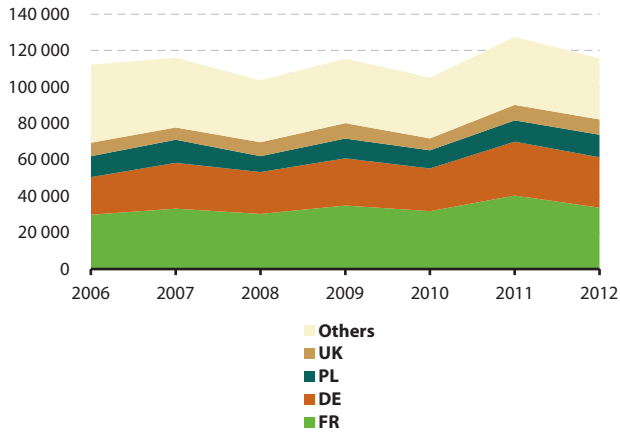
Source: Eurostat (online data code: apro_cpp_crop)

According to the European Commission's Directorate-General for Agriculture and Rural Development about two thirds of the rice consumed by EU citizens is grown in the EU. Rice is cultivated on submerged land in coastal plains, deltas and river basins. It can grow in areas with a high risk of salinity and therefore helps keep salt water away from the land. Rice production in the EU-28 was 3.0 million tonnes in 2012, down moderately (by 3.3 %) on the level of 2011. Italy produced a little over a half (54.8 %) of the EU-28's rice in 2012. Much of this production was concentrated in the Po valley. Almost 30 % of the EU-28's production came from Spain, where production was rather more widespread (in regions such as Andalucía, Extremadura and Aragon).

Sugar beet

The EU-28 produced 115.6 million tonnes of sugar beet in 2012, which was 11.8 million tonnes less than in 2011 (see Figure 4.5), but still at the top end of the range recorded since the 2006 reform of the EU's sugar policy (production fluctuated between 104 and 116 million tonnes from 2006–12 other than the relative high of 2011, when output reached 127 million tonnes). A little more than half of the EU-28's sugar beet production in 2012 came from France (29.2 %) and Germany (23.9 %), with Poland (10.7 %) and the United Kingdom (7.3 %) being the next largest producers.

Figure 4.5: Production of sugar beet, 2006–12
(1 000 tonnes)



Source: Eurostat (online data code: apro_cpp_crop)

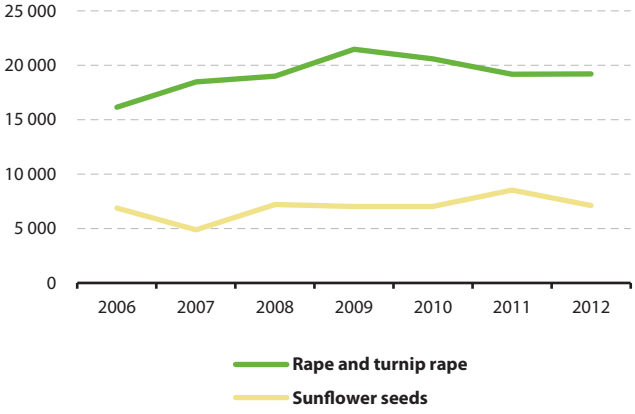
Sugar beet production in the EU is managed by an overarching system of production quotas, minimum price guarantees and trade measures for sugar. The division of the 13.3 million tonne sugar quota in 2012 was divided into national production limits among the 19 sugar beet producing Member States of the EU. According to provisional estimates from the European Commission's Directorate-General for Agriculture and Rural Development the production of sugar beet in the EU-27 in 2012 was transformed into 16.9 million tonnes of white sugar (about one quarter of which was out-of-quota production) and 0.7 million tonnes of isoglucose.

Oilseeds

Rape and turnip rape, and sunflowers are the main types of oilseeds that are produced in the EU-28. An estimated 19.2 million tonnes of rape and turnip rape were produced in 2012, a similar quantity to that produced in 2011 (+0.2 %). By comparison, an estimated 7.1 million tonnes of sunflower seed were produced across the EU-28 in 2012. This marked a relatively sharp reduction (-17.6 %) from the most recent peak in production (8.5 million tonnes recorded in 2011) — see Figure 4.6.

Figure 4.6: Production of rape and turnip rape and sunflower seeds, EU-28, 2006–12

(1 000 tonnes)



Source: Eurostat (online data code: apro_cpp_crop)

Vegetables

The EU produces a broad range of fruit and vegetables thanks to its varied climatic and topographic conditions. The EU is one of the main global producers of tomatoes; open-air production is typical in the more southerly Member States and this is complimented by all-season production in greenhouses that is typical in countries such as the Netherlands and Belgium. The EU-28 produced an estimated 15.9 million tonnes of tomatoes in 2012, of which approximately two thirds came from Italy and Spain. Whereas the production of tomatoes declined sharply in Italy (down from 7.5 million tonnes in 2000 to 6.0 million tonnes in 2011), production continued to fluctuate around the 4.0 million tonne mark in Spain.

The EU-28 produced an estimated 5.2 million tonnes of carrots and 6.0 million tonnes of onions in 2012 (on the basis of the information presented in Table 4.2). Carrot production was relatively high in Poland and the United Kingdom, together they accounted for a little over one quarter (16.1 % and 12.8 % respectively) of the EU-28's output in 2012. The production of carrots in these two Member States remained relatively stable during the period from 2000–12, at around 0.7–0.8 million tonnes. The Netherlands and Spain are the principal onion producing countries within the EU, together accounting for a little over two fifths (42.2 %) of the EU-28's output in 2012. Production in the Netherlands rose relatively sharply after 2006.

Fruit

Around 11.7 million tonnes of apples were produced in the EU-28 in 2012 (on the basis of the latest, provisional data, see Table 4.2 for more details regarding data availability). Apples are produced in almost all of the EU Member States, although Poland, Italy and France are by far the largest producers. Citrus fruit production in the EU is much more restricted by climatic conditions; the vast majority of oranges are produced in Spain and Italy, although there are also relatively low levels of production in Greece and Portugal.

Table 4.2: Production of fruit and vegetables, 2012

(1 000 tonnes)

	Tomatoes (1)	Carrots (2)	Onions (1)	Apples (3)	Peaches (4)	Oranges (5)
EU-28	*15 855*	*5 185*	*5 977*	*11 723*	*2 834*	*6 350*
BE	218	317	75	228	:	:
BG	94	10	10	40	28	-
CZ	13	21	32	119	2	-
DK	13	99	63	19	0	-
DE	61	593	588	972	0	-
EE	5	12	0	1	-	-
IE	:	:	:	:	-	-
EL	980	53	250	251	656	792
ES	4 074	370	1 170	482	737	2 819
FR	764	541	412	1 859	301	6
HR	18	14	23	37	4	0
IT	5 962	543	414	2 411	1 026	2 521
CY	16	3	7	6	2	27
LV	6	11	7	9	-	-
LT	12	60	25	64	-	-
LU	0	0	0	2	-	-
HU	110	51	44	614	18	-
MT	11	1	7	0	1	2
NL	805	511	1 353	281	0	0
AT	52	98	135	262	3	-
PL	759	835	642	2 877	9	-
PT	1 393	75	48	186	31	183
RO	423	111	214	517	16	0
SI	0	0	0	55	0	-
SK	14	7	13	45	2	-
FI	38	56	22	5	-	-
SE	15	129	50	21	-	0
UK	0	664	374	359	0	-
IS	2	1	-	-	-	0
NO	12	47	19	17	0	0

(1) Belgium and Italy: 2011; Norway: 2008.
(2) Belgium and Italy: 2011; Norway: 2007.
(3) Belgium, France, Italy and Sweden: 2011; United Kingdom: 2010; Norway: 2007.
(4) Bulgaria: 2011; France and Malta: 2010.
(5) Spain, France, Croatia and Malta: 2011.

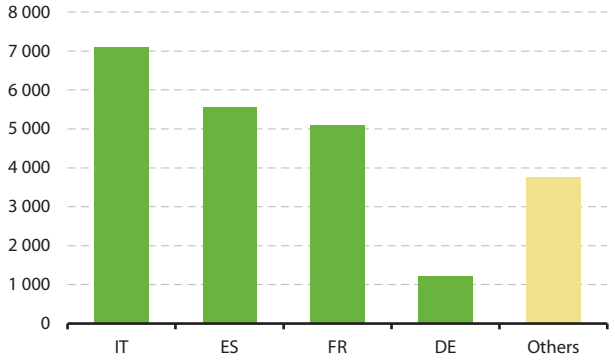
Source: Eurostat (online data code: apro_cpp_crop)

Grapes

The EU is the largest wine producer in the world, accounting for about two thirds of global production according to the European Commission's Directorate-General of Agriculture and Rural Development. Of the estimated 22.8 million tonnes of grapes produced in the EU-28 in 2012, the vast majority (91 %) was destined for wine production. Italy, Spain and France are the principal grape producers in the EU (see Figure 4.7).

Figure 4.7: Production of grapes, 2012 (1)

(1 000 tonnes)



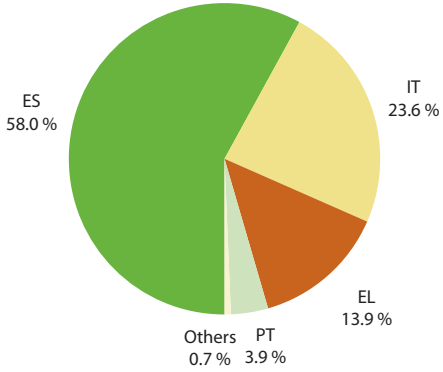
(1) France and Italy: 2011.

Source: Eurostat (online data code: apro_cpp_crop)

Olives

The EU is also the largest producer of olive oil in the world, accounting for almost three quarters of global production according to the European Commission's Directorate-General of Agriculture and Rural Development. Olive growing is a major feature of sociocultural life in many Mediterranean regions. Olive trees are grown in Spain, Italy, Greece, Portugal, France, Cyprus, Slovenia and Malta — although 95 % of the olive production in the EU-28 in 2011 was concentrated in the first three of these eight Member States (see Figure 4.8).

Figure 4.8: Production of olives, 2011
(% share of EU-28 total, based on tonnes)



Source: Eurostat (online data code: apro_cpp_crop)

DATA SOURCES AND AVAILABILITY

Statistics on crop products are obtained by sample surveys, supplemented by administrative data and estimates based on expert observations. The sources vary from one EU Member State to another because of national conditions and statistical practices. National statistical institutes or Ministries of Agriculture are responsible for data collection in accordance with EC Regulations. The finalised data sent to Eurostat are as harmonised as possible. Eurostat is responsible for establishing EU aggregates.

The statistics that are collected on agricultural products relate to more than 100 individual crop products. Information is collected for the area under cultivation (expressed in hectares), the quantity harvested (expressed in tonnes) and the yield (expressed in kilograms per hectare). For some products, data at a national level may be supplemented by regional statistics at NUTS level 1 or level 2.

4.2 Livestock and meat

In recent years, the European Union (EU) has been active in harmonising animal health measures and systems of disease surveillance, diagnosis and control; it has also developed a legal framework for trade in live animals and animal products. In part, this has been in response to consumer concerns regarding public health and food safety aspects of animal health. In this regard, the European Commission established a framework for animal health and welfare measures for the period 2007–13. In addition, the revision of legislation in 2004 on the hygiene of foodstuffs — known as the hygiene package — was implemented in the enlarged EU, with the aim of ensuring the hygiene of foodstuffs at all stages of the production process through to sale.

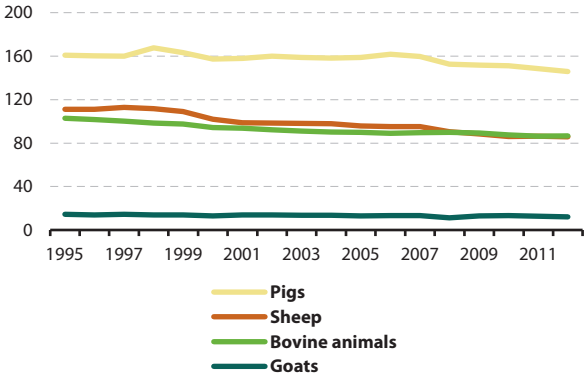
The EU's Common Market Organisations (CMOs) for the meat sector establish common rules and policy instruments for managing relevant markets: to stabilise markets; to restore levels of consumption of animal products, and; to make animal products more competitive on the world market. As such, policies for the meat sector try to address concerns of producers, meat processors and consumers.

Statistics on livestock and meat production (based on the slaughter of animals fit for human consumption) give some indication of supply-side developments and adjustments, which are important to monitor the Common Agricultural Policy (CAP).

Livestock numbers

Since the early 1980s, there has been a steady downward trend in the number of livestock on agricultural holdings across the EU. Indeed, estimates of pig and sheep populations for the EU-27 in 2012 point to new lows (see Figure 4.9); there were 15.1 million fewer pigs when compared with 1995 (an overall decline of 9.4 %) and 25.3 million fewer sheep (an overall decline of 22.8 %). There were also an estimated 16.1 million fewer cattle in 2012 than 1995 (although the number of cattle was marginally higher in 2012 than a year earlier) and there were 2.2 million fewer goats.

Figure 4.9: Livestock numbers, EU-27, 1995–2012
(million head)



Source: Eurostat (online data codes: apro_mt_lscatl, apro_mt_lspig, apro_mt_lssheep and apro_mt_lsgoat)

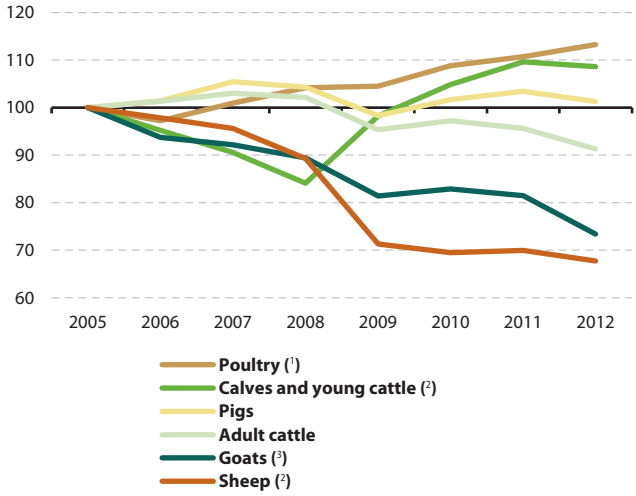
Meat production

There have been considerable structural changes in EU livestock farming since the 1980s. Smallholders on mixed farms have gradually given way to larger-scale, specialised livestock holdings. Even though the number of livestock animals has been in decline, more efficient farming methods have led to higher meat yields; the average carcass weight of pigs in the EU-15 Member States increased by 5.5 % between 1995 and 2012 to 89.5 kg, while the corresponding change for cattle was an increase of 5.2 % to 291 kg.

Poultry meat aside, production of other meat categories (based on available data for the EU-27 Member States) was lower in 2012 than in 2011 (see Figure 4.10): pig meat production for the EU-27 declined by 2.1 % to 21.9 million tonnes, although the production of pig meat fluctuated within a relatively narrow range (+/-5 %) during the period 2005–12; beef production (from adult cattle over one-year old) fell relatively sharply (down 4.5 % from 2011–12), confirming the longer-term development of reduced output; veal production (from young cattle under one-year old) declined by 0.9 % from a relative high in 2011, and; the production

Figure 4.10: Production of meat, by type of animal, EU-27, 2005–12

(2005=100, based on tonnes of carcass weight)



(1) Excluding, Belgium, Estonia, Ireland, the Netherlands, Austria and Slovakia.
(2) Excluding Bulgaria.
(3) Excluding Bulgaria and Romania.

Source: Eurostat (online data code: apro_mt_pann)

of sheep meat and goat meat fell by an estimated 3.2 % and 9.9 % respectively between 2011 and 2012, confirming sharp downward trends in the production of both of these types of meat in recent years. By contrast, poultry meat production was 2.3 % higher in 2012 than in 2011, reaching an estimated 12.5 million tonnes in the EU-28 (see Table 4.3).

Table 4.3: Production of meat, by type of animal, 2012

(1 000 tonnes of carcass weight)

	Bovine animals	Pigs	Sheep	Goats	Poultry
EU-28	*7 578.2*	*22 003.7*	*708.0*	*54.3*	*12 537.6*
BE	262.3	1 109.6	2.1	0.1	410.2
BG	5.3	48.8	:	:	99.1
CZ	65.7	239.8	0.2	0.0	152.6
DK	125.4	1 603.7	1.7	0.0	148.8
DE	1 140.0	5 459.0	22.0	0.0	1 428.0
EE	7.2	*33.4*	0.1	0.0	:
IE	495.4	241.5	53.7	0.0	:
EL	56.2	114.6	69.2	30.1	181.6
ES	*591.4*	*3 466.3*	*122.0*	*9.7*	*1 384.2*
FR	*1 477.2*	*1 957.4*	*83.0*	*6.3*	*1 709.0*
HR	46.8	85.6	0.5	:	61.3
IT	981.1	1 620.7	30.9	1.2	1 258.6
CY	5.3	51.7	3.1	2.7	25.3
LV	*16.4*	*24.0*	*0.3*	*0.0*	24.5
LT	39.9	58.9	0.1	0.0	81.8
LU	8.5	10.3	0.0	0.0	0.0
HU	24.7	345.9	0.2	0.0	412.2
MT	1.1	5.7	0.1	0.0	4.3
NL	373.4	1 331.7	13.1	1.5	:
AT	221.1	529.8	7.6	0.8	:
PL	371.0	1 695.2	0.7	0.0	1 548.8
PT	93.0	362.3	9.7	0.9	292.2
RO	28.8	282.1	2.2	:	312.7
SI	33.1	21.0	0.1	0.0	58.7
SK	9.8	54.2	0.6	0.0	:
FI	80.4	192.8	0.9	0.0	107.4
SE	135.3	233.0	5.0	0.0	116.3
UK	882.6	824.6	275.8	0.2	1 607.9
IS	3.9	5.9	9.9	0.0	7.8
RS	35.0	128.3	1.4	0.0	54.7

Source: Eurostat (online data code: apro_mt_pann)

Beef is mainly produced from cattle breeds grown specifically for their meat but can also come from dairy cattle. Male calves from dairy cows are of no use for producing milk and most of these are used for veal production. Just less than three quarters of the beef produced in the EU-28 came from either bulls (38.3 %) or cows (35.2 %) in 2012 (see Table 4.4). In many of the EU Member States this proportion was even higher. However, in Ireland and the United Kingdom, a majority (60.1 % and 66.3 % respectively) of the beef that was produced in 2012 came from either heifers (females over one-year old that did not calve) or bullocks (castrated males over one-year old).

Table 4.4: Production of beef and veal, by type of bovine animals, 2012

(1 000 tonnes of carcass weight)

	Bovine animals	Calves (1)	Heifers	Cows	Bullocks	Bulls
EU-28	*7 578.2*	*1 036.6*	*1 091.5*	*2 299.8*	*647.1*	*2 504.9*
BE	262.3	52.6	2.6	125.7	0.1	81.2
BG	5.3	0.7	0.5	3.1	*0.0*	1.0
CZ	65.7	0.8	5.6	28.5	0.1	30.7
DK	125.4	28.5	11.9	59.8	2.3	23.3
DE	1 140.0	60.0	144.0	387.0	9.0	541.0
EE	7.2	0.2	0.6	4.8	0.1	1.5
IE	495.4	0.8	125.9	104.4	171.5	92.9
EL	56.2	9.2	7.2	7.3	0.6	31.9
ES	*591.4*	*249.3*	*80.3*	*95.2*	*1.9*	*164.8*
FR	*1 477.2*	*216.7*	*156.9*	*648.7*	*79.5*	*375.3*
HR	46.8	5.9	6.4	7.9	0.0	26.6
IT	981.1	127.3	187.2	154.2	6.5	506.2
CY	5.3	0.8	0.5	1.4	0.0	2.6
LV	*16.4*	*1.1*	*2.5*	*9.0*	*0.0*	*3.8*
LT	39.9	0.4	5.1	18.2	0.0	16.2
LU	8.5	0.2	1.7	2.2	0.3	4.1
HU	24.7	0.6	2.4	18.7	0.0	3.0
MT	1.1	0.0	0.1	0.4	0.0	0.6
NL	373.4	214.6	2.9	134.2	0.0	21.7
AT	221.1	7.2	30.5	64.7	10.5	108.2
PL	371.0	8.1	44.5	122.4	0.4	195.6
PT	93.0	24.3	11.0	19.2	0.6	37.8
RO	28.8	6.9	1.9	14.6	1.5	3.9
SI	33.1	2.1	3.5	6.0	0.2	21.3
SK	9.8	0.1	0.7	5.2	0.0	3.7
FI	80.4	0.3	9.1	23.7	0.0	47.2
SE	135.3	14.4	17.0	44.7	8.2	51.0
UK	882.6	3.6	228.9	188.5	353.8	107.8
IS	3.9	0.0	0.3	1.5	0.2	1.2
RS	35.0	3.4	2.5	5.5	0.1	23.4

(1) Including other young cattle under one year.

Source: Eurostat (online data code: apro_mt_pann)

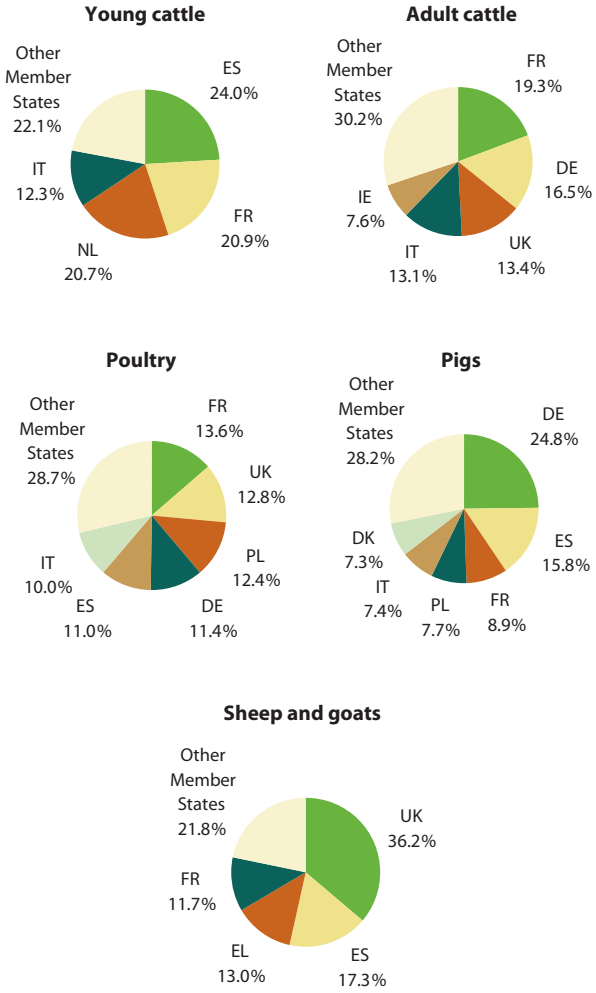
Germany produced about one quarter (24.8 % or 5.5 million tonnes) of the EU-28's pig meat in 2012, while Spain produced one sixth (15.8 % or 3.5 million tonnes) of the total (see Figure 4.11 overleaf). After 11 years of consecutive growth, pig meat production in Germany declined in 2012 (down 2.5 % when compared with 2011). By contrast, pig meat production in Spain was almost unchanged in 2012, and only just below its relative peak of 2008.

France (19.3 %), Germany (16.5 %), the United Kingdom (13.4 %) and Italy (13.1 %) together contributed a little over three fifths (62.3 %) of the EU-28's beef production in 2012. Beef production in each of these countries was lower in 2012 than a year earlier. The rate of decline in France (-5.5 %) and the United Kingdom (-5.7 %) was larger than the average rate of decline for the EU-28 (-4.6 %).

The United Kingdom (36.2 %) and Spain (17.3 %) contributed a little over one half (53.5 %) of the EU-28's sheep and goat meat production in 2012. However, production in both of these countries fell in 2012 at a relatively rapid pace (-4.6 % and an estimated -7.1 % respectively).

France, the United Kingdom, Poland, Germany, Spain and Italy each accounted for 10–14 % of the total production of poultry meat in the EU-28 in 2012. The increase in poultry meat production for the EU-28 in 2012 was driven by an expansion in output in Poland (an increase of 11.8 % on the level for 2011) and, to a lesser extent, the United Kingdom and Italy (both recording increases of 3.2 %). By contrast, there was a slight decline in the production of poultry meat in France (-1.4 %). It is also worth noting that production in Germany increased for a 12th consecutive year, albeit by only 3 000 tonnes (corresponding to a rise of 0.2 %) in 2012.

Figure 4.11: Production of meat, 2012
(% share of EU-28 total)



Source: Eurostat (online data code: apro_mt_pann)

DATA SOURCES AND AVAILABILITY

Livestock and meat statistics are collected by EU Member States under Regulation (EC) No 1165/2008, which covers bovine, pig, sheep and goat livestock; slaughtering statistics on bovine animals, pigs, sheep, goats and poultry; and production forecasts for beef, veal, pig meat, sheep meat and goat meat.

Livestock surveys cover sufficient agricultural holdings to account for at least 95 % of the national livestock population, as determined by the last survey on the structure of agricultural holdings.

Bovine and pig livestock statistics are produced twice a year, with reference to a given day in May/June and a given day in November/December. Those EU Member States whose bovine animal populations are below 1.5 million head or whose pig populations are below 3.0 million head may produce these statistics only once a year, with reference to a given day in November/December.

Sheep livestock statistics are only produced once a year, with reference to a given day in November/December, by those EU Member States whose sheep populations are 500 000 head or above; the same criteria and thresholds apply for statistics on goat populations.

Statistics on the slaughtering of animals in slaughterhouses are produced monthly by each EU Member State, the reference period being the calendar month. Statistics on slaughtering carried out other than in slaughterhouses is produced annually, the reference period being the calendar year.

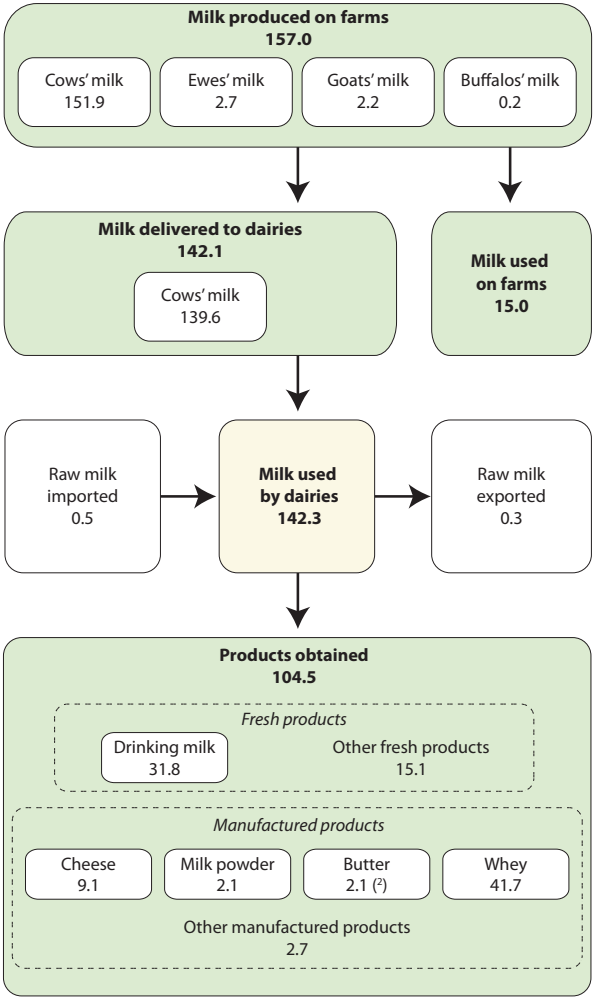
4.3 Milk and milk products

The EU's dairy sector operates within the framework of milk quotas, which were introduced in 1984 to address problems of surplus production but are set to expire in April 2015. Each EU Member State has two quotas, one for deliveries to dairies and the other for direct sales at farm level. Milk production data are used for signalling imbalances in the market that, if serious enough, trigger public intervention (of butter and skimmed milk powder) and/or private storage. When national quotas are overrun then punitive 'super-levies' are recovered from the farmers or dairies involved.

Milk production

Farms across the EU-28 produced an estimated 157.0 million tonnes of milk in 2011, of which an estimated 151.9 million tonnes (or 96.7 %) was cows' milk, the rest being milk from ewes, goats and buffalos. The vast majority (90.5 % in 2011) of the milk produced on farms was delivered to dairies, the rest being used on the farm — see Figure 4.12 for a wider picture of the production and use of milk. The figures presented in this subchapter exclude information for Malta (which is generally confidential).

Figure 4.12: Production and use of milk, EU-28, 2011 (1)
(million tonnes)



(1) Estimates; excluding Malta; only flows of raw milk are displayed; changes in stocks are not recorded.
(2) Includes other yellow fat dairy products.

Source: Eurostat (online data codes: apro_mk_pobta and apro_mk_farm)

The production of cows' milk on farms in the EU-28 increased almost 2.0 million tonnes between 2010 and 2011. The EU-28's dairy herd of 23.0 million cows in 2011 had an estimated average yield of 6 590 kg per head (see Table 4.5). The long-term trend of rising milk production from fewer dairy cows, as a result of rising yields, was confirmed by the latest figures available for 2011, as milk yields in the EU-28 rose by 2.5 %, while the number of dairy cows fell by 1.1 %.

Table 4.5: Production of cows' milk on farms, 2010 and 2011

	Cows' milk production on farms (kg/head)		Number of dairy cows (1 000 head)		Apparent yield (kg/head)	
	2010	2011	2010	2011	2010	2011
EU-28 (1)	149 863	*151 854*	*23 308*	23 044	*6 430*	*6 590*
BE	3 111	3 151	518	511	6 009	6 171
BG	1 124	1 126	314	313	3 584	3 595
CZ	2 683	2 736	375	374	7 146	7 313
DK	4 910	4 880	573	579	8 569	8 427
DE	29 594	30 301	4 182	4 190	7 077	7 232
EE	675	692	97	96	6 999	7 198
IE	5 350	5 556	1 007	1 036	5 313	5 365
EL	744	757	*144*	130	*5 164*	5 823
ES	6 357	*6 488*	845	798	7 521	*8 131*
FR	24 032	25 092	3 718	3 664	6 464	6 848
HR	613	657	207	185	2 969	3 557
IT	11 399	11 299	1 746	1 755	6 529	6 438
CY	151	156	23	24	6 454	6 474
LV	831	842	164	164	5 063	5 129
LT	1 733	1 782	360	350	4 815	5 100
LU	295	292	46	45	6 420	6 567
HU	1 685	1 712	239	250	7 050	6 850
MT	:	:	6	6	:	:
NL	11 941	11 851	1 518	1 504	7 866	7 879
AT	3 258	3 307	533	527	6 115	6 271
PL	12 279	12 414	2 529	2 446	4 855	5 075
PT	1 918	1 919	243	242	7 888	7 928
RO	4 500	4 075	1 179	1 170	3 818	3 483
SI	604	602	110	109	5 515	5 514
SK	918	928	159	154	5 763	6 024
FI	2 336	2 301	284	282	8 218	8 173
SE	2 862	2 850	349	348	8 211	8 200
UK	13 960	14 088	1 847	1 800	7 558	7 827
IS	:	:	:	25	:	:
CH	:	4 183	:	:	:	:
RS	:	:	482	477	:	:

(1) Excluding Malta.

Source: Eurostat (online data codes: apro_mk_farm and apro_mk_lscatl)

Average yields of milk per cow varied considerably between EU Member States in 2011. The apparent yield was highest — between 8 000 kg and 8 500 kg per cow per year — in Spain, Finland, Sweden and Denmark. By contrast, the apparent yield was relatively low — between 3 500 kg and 3 600 kg per head — in Romania, Bulgaria and Croatia, where milk production was typically less specialised.

Table 4.6: Regional production of cows' milk on farms, by apparent yield, 2011

National region with the highest level of apparent yield for cows' milk		NUTS 2 region	Production of cows' milk on farms		Number of dairy cows (1 000 head)	Apparent yield (kg/ head)
			Regional total (1 000 tonnes)	Share of national total (%)		
BE	Prov. Antwerpen	BE21	657.1	20.9	73.4	8 952
BG	Yugoiztochen	BG34	293.0	26.0	54.7	5 356
CZ	Moravskoslezsko	CZ08	158.5	5.8	20.1	7 885
DK	Midtjylland	DK04	1 463.9	30.0	172.0	8 511
DE	Brandenburg (1)	DE4	1 364.1	4.5	157.6	8 655
EE	Eesti (2)	EE00	692.4	100.0	96.2	7 198
IE	Southern and Eastern	IE02	4 446.0	80.0	823.7	5 398
EL	Thessalia	EL14	93.0	12.3	14.4	6 462
ES	Cantabria	ES13	422.0	6.5	38.6	10 934
FR	Centre (FR)	FR24	492.6	2.0	64.4	7 649
HR	Sredisnja i Istocna (Panonska) Hrvatska (3)	HR02	471.0	71.7	97.9	4 811
IT	Emilia-Romagna	ITH5	2 433.2	21.5	261.3	9 312
CY	Kypros (2)	CY00	156.0	100.0	24.1	6 474
LV	Latvija (2)	LV00	841.7	100.0	164.1	5 129
LT	Lietuva (2)	LT00	1 782.3	100.0	331.0	5 385
LU	Luxembourg (2)	LU00	292.2	100.0	45.0	6 494
HU	Közép-Dunántúl	HU21	244.8	14.3	31.0	7 898
MT	Malta (2)	MT00	:	-	:	:
NL	Utrecht	NL31	646.0	5.5	83.0	7 783
AT	Vorarlberg	AT34	163.5	4.9	24.3	6 730
PL	Lubuskie	PL43	122.0	1.0	19.2	6 354
PT	Alentejo	PT18	236.6	12.3	25.2	9 390
RO	Nord-Vest	RO11	820.0	20.1	209.1	3 922
SI	Zahodna Slovenija	SI02	208.6	34.7	33.9	6 153
SK	Východné Slovensko	SK04	161.5	17.4	45.3	3 565
FI	Pohjois- ja Itä-Suomi	FI1D	1 265.5	55.0	150.2	8 425
SE	Västsverige	SE23	710.7	24.9	84.9	8 371
UK	North East (England) (1)	UKC	112.0	0.8	14.0	8 000

(1) NUTS level 1.
(2) NUTS level 2 region covers the whole country.
(3) NUTS 2007.

Source: Eurostat (online data codes: agr_r_milkpr and agr_r_animal)

The diversity of landscapes and climatic conditions within some of the individual EU Member States often helps explain regional specialisations as regards dairy farming — pasture is generally grown in lowland areas with a temperate climate. The regions with the highest milk yields within each country are shown in Table 4.6, with Cantabria (Spain) the only region to report an apparent yield of more than 10 000 kg per head in 2011. Note that some regions with high apparent yields accounted for relatively low shares of national cows' milk production: the Centre region of France, Lubuskie in Poland and the North East of England each reported regional production of cows' milk on farms accounting for no more than 2.0 % of the national total in 2011.

Cows' milk production on farms in 2011 was highest (across NUTS 2 regions of the EU) in Bretagne (France), Southern and Eastern Ireland and Lombardia (Italy), reaching 5.3 million, 4.4 million and 4.2 million tonnes respectively (see Table 4.7). Output was also relatively high in Mazowieckie (Poland), Galicia (Spain) and Friesland (the Netherlands). Southern and Eastern Ireland (with 824 thousand head), Bretagne (with 727 thousand head) and Lombardia (543 thousand head) recorded the highest number of dairy cows in 2011 — note that each NUTS 2 region has a different land area and that the count of animals is influenced to some degree by the size of each region, as well as the propensity of certain regions to specialise in dairy farming. Note also that the data for Germany and the United Kingdom is only available for NUTS 1 regions (which cover larger areas of land).

Table 4.7: Regional production of cows' milk on farms, by level of production, 2011

National region with the highest level of cows' milk production		NUTS 2 region	Production of cows' milk on farms		Number of dairy cows (1 000 head)	Apparent yield (kg/ head)
			Regional total (1 000 tonnes)	Share of national total (%)		
BE	Prov. West-Vlaanderen	BE25	745.7	23.7	88.8	8 398
BG	Yuzhen tsentralen	BG42	301.0	26.7	107.0	2 813
CZ	Jihovýchod	CZ06	630.2	23.0	83.9	7 512
DK	Syddanmark	DK03	1 968.0	40.3	239.0	8 234
DE	Bayern (1)	DE2	7 931.0	26.2	1 235.5	6 419
EE	Eesti (2)	EE00	692.4	100.0	96.2	7 198
IE	Southern and Eastern	IE02	4 446.0	80.0	823.7	5 398
EL	Kentriki Makedonia	EL12	305.6	40.4	65.1	4 694
ES	Galicia	ES11	2 546.2	39.2	326.4	7 801
FR	Bretagne	FR52	5 320.8	21.2	727.0	7 319
HR	Sredisnja i Istocna (Panonska) Hrvatska (3)	HR02	471.0	71.7	97.9	4 811
IT	Lombardia	ITC4	4 227.3	37.4	543.2	7 782
CY	Kypros (2)	CY00	156.0	100.0	24.1	6 474
LV	Latvija (2)	LV00	841.7	100.0	164.1	5 129
LT	Lietuva (2)	LT00	1 782.3	100.0	331.0	5 385
LU	Luxembourg (2)	LU00	292.2	100.0	45.0	6 494
HU	Észak-Alföld	HU32	393.3	23.0	60.0	6 556
MT	Malta (2)	MT00	:	-	:	:
NL	Friesland (NL)	NL12	2 084.0	17.6	278.0	7 496
AT	Oberösterreich	AT31	1 038.6	31.4	165.7	6 268
PL	Mazowieckie	PL12	2 730.0	22.0	494.1	5 525
PT	Norte	PT11	752.7	39.2	83.0	9 069
RO	Nord-Est	RO21	931.0	22.8	276.1	3 372
SI	Vzhodna Slovenija	SI01	393.0	65.3	76.8	5 117
SK	Západné Slovensko	SK02	492.4	53.0	59.0	8 346
FI	Pohjois- ja Itä-Suomi	FI1D	1 265.5	55.0	150.1	8 431
SE	Småland med öarna	SE21	817.3	28.7	99.6	8 206
UK	South West (England) (1)	UKK	3 322.0	23.6	416.0	7 986

(1) NUTS level 1.
(2) NUTS level 2 region covers the whole country.
(3) NUTS 2007.

Source: Eurostat (online data codes: agr_r_milkpr and agr_r_animal)

With the milk delivery quota for 2010/11 being set at 146.7 million tonnes for the EU-27, the estimated 139.0 million tonnes of cow's milk collected by dairies in 2011 was well under quota. The milk delivery quota for the EU-27 was raised by another 1 % for 2011/12, part of the 'soft landing' approach for the end of the milk quota system that started in April 2009 with consecutive 1 % increases over a five-year period. Despite cow's milk collections by dairies in the EU-27 increasing slightly to an estimated 139.5 million tonnes in 2012, this remained well under quota, with many EU Member States falling short of their quota ceilings.

Table 4.8: Collection of milk by dairies, 2012

(1 000 tonnes)

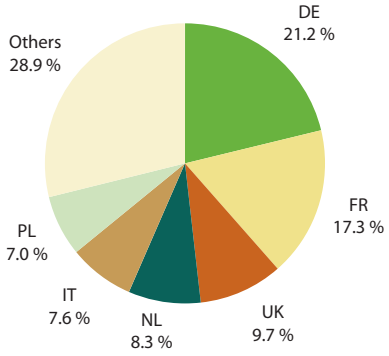
	Cows' milk collected			Milk collected from other animals		
	2010	2011	2012	2010	2011	2012
EU-28 (1)	*136 890*	*139 570*	*140 115*	*2 486.7*	*2 487.8*	*3 080.9*
BE	3 067	3 101	3 072	8.5	9.1	9.5
BG	565	549	514	36.9	30.7	34.7
CZ	2 312	2 366	2 429	0.0	0.0	0.0
DK	4 830	4 800	4 927	0.0	0.0	0.0
DE	29 076	29 764	29 703	:	:	12.6
EE	621	642	665	0.0	0.0	0.0
IE	5 327	5 536	5 382	:	0.0	0.0
EL	673	639	637	:	:	610.8
ES	5 877	*5 838*	*6 089*	715.9	*684.3*	*666.1*
FR	23 576	24 673	24 249	797.2	819.4	779.0
HR	624	626	602	7.0	7.1	7.3
IT	10 500	10 480	10 598	634.6	635.8	626.6
CY	151	153	154	36.2	39.4	38.3
LV	625	662	718	:	0.0	0.0
LT	1 278	1 317	1 360	0.0	0.0	0.0
LU	282	281	278	:	:	:
HU	1 322	1 308	1 398	:	1.0	0.9
MT	:	:	:	:	:	:
NL	11 626	11 642	11 675	179.0	190.2	212.7
AT	2 771	2 896	2 964	12.5	15.7	17.3
PL	9 002	9 309	9 858	1.7	1.4	1.6
PT	1 829	1 842	1 863	35.6	35.1	36.7
RO	904	897	888	21.7	18.7	21.6
SI	520	526	535	0.0	0.0	0.0
SK	800	812	851	:	:	5.1
FI	2 289	2 255	2 254	0.0	0.0	0.0
SE	2 862	2 850	2 861	0.0	0.0	0.0
UK	13 582	13 805	13 591	0.0	0.0	0.0
CH	:	3 446	3 444	:	:	0.0
ME	:	:	23	:	:	:
TR	:	:	7 933	:	:	73.2

(1) Sum of available data for the EU Member States.

Source: Eurostat (online data code: apro_mk_pobta)

Just over one fifth (21.2 %) of all the cows' milk collected by the EU-28's dairies in 2012 came from Germany, while slightly more than a sixth of the total (17.3 %) originated from dairies in France (see Figure 4.13). Dairies collected relatively little milk from other animals (sheep, goats and buffalos) in most of the EU Member States. However, in Greece the volume of milk collected from other species (611 thousand tonnes) was similar to the level of milk collected from cows (637 thousand tonnes). Italy, Spain and France collected quantities of milk from other animals that were similar to Greece, but these volumes were dwarfed by the respective quantities of cows' milk that their dairies collected (see Table 4.8).

Figure 4.13: Collection of cows' milk by dairies, 2012 (1)
(% share of EU-28 total, based on tonnes)



(1) Estimates; excluding Malta.

Source: Eurostat (online data code: apro_mk_pobta)

Milk products

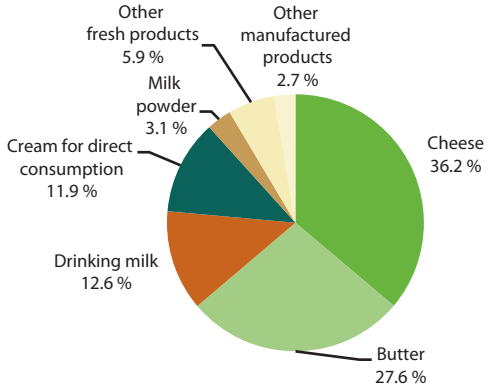
The milk delivered to dairies is converted into a number of fresh products and manufactured dairy products. Some 67.2 million tonnes of raw milk were used to produce 9.1 million tonnes of cheese in the EU-28 in 2011; while 31.5 million tonnes of raw milk were turned into a similar amount of drinking milk; 19.3 million tonnes of raw milk were converted into 2.1 million tonnes of milk powder, and; 34.8 million tonnes of whole milk were used to produce an estimated 2.1 million tonnes of butter as well as associated skimmed milk and buttermilk; this explains why the amount of 'whole milk' used for producing butter was higher than the 'total' milk used.

Table 4.9: Utilisation of milk by dairies, EU-28, 2011
(million tonnes)

	Utilisation of milk		Products obtained
	Total	of which, whole milk	
Drinking milk	*31.5*	*17.8*	*31.8*
Cream for direct consumption	*2.6*	*16.4*	*2.4*
Milk powder	*19.3*	*4.7*	*2.1*
Cheese	*67.2*	*52.2*	*9.1*
Butter	*2.2*	*34.8*	*2.1*

Source: Eurostat (online data code: apro_mk_pobta)

Figure 4.14: Utilisation of whole milk, EU-28, 2012 (1)
(%)



(1) Estimates; excluding Luxembourg and Malta; Germany and Spain, 2011.
Source: Eurostat (online data code: apro_mk_pobta)

Just over one fifth (21.8 %) of the estimated 31.8 million tonnes of drinking milk produced in the EU-28 in 2012 came from the United Kingdom, despite this Member State accounting for only about one tenth of the milk produced in the EU-28. This relative specialisation was noted for other dairy products too: for example, Germany and the Netherlands accounted for almost half (44.7 %) of the whey produced (and not re-used by national dairies), and; Germany, France and Italy accounted for almost three fifths (57.3 %) of the 9.2 million tonnes of cheese produced across the EU-28 in 2012.

Table 4.10: Dairy products obtained from milk, 2012

(1 000 tonnes)

	Drinking milk	Whey (1)	Cream for direct consumption	Milk powder	Butter (1)(2)	Cheese
EU-28	*31 750*	*43 187*	*2 514*	*2 060*	*1 987*	*9 230*
BE	706	997	176	162	74	78
BG	72	383	2	0	1	69
CZ	609	921	47	30	27	112
DK	493	2 031	65	145	128	300
DE	5 251	12 289	542	503	490	2 161
EE	86	65	27	5	4	43
IE	502	129	21	78	:	:
EL	488	0	14	0	0	195
ES	3 485	1 473	153	21	37	316
FR	3 616	635	414	403	417	1 928
HR	311	36	27	:	5	32
IT	2 620	4 000	118	:	101	1 204
CY	71	33	4	0	0	19
LV	66	185	36	:	6	31
LT	92	1 008	3	21	12	112
LU	:	:	:	:	:	:
HU	394	338	5	:	9	73
MT	:	:	:	:	:	:
NL	524	7 021	9	287	195	764
AT	770	1 150	63	5	34	160
PL	1 511	4 785	244	140	165	721
PT	859	96	18	17	28	72
RO	208	22	48	2	9	67
SI	152	77	13	:	3	18
SK	317	242	32	4	9	32
FI	736	861	64	27	52	102
SE	867	1 008	113	68	37	101
UK	6 932	3 399	250	95	145	357
CH	481	2	87	93	51	181
ME	5	0	1	:	0	1
TR	1 250	463	25	82	40	564

(1) EU-28: sum of available data for the EU Member States.
(2) Includes other yellow fat dairy products.

Source: Eurostat (online data code: apro_mk_pobta)

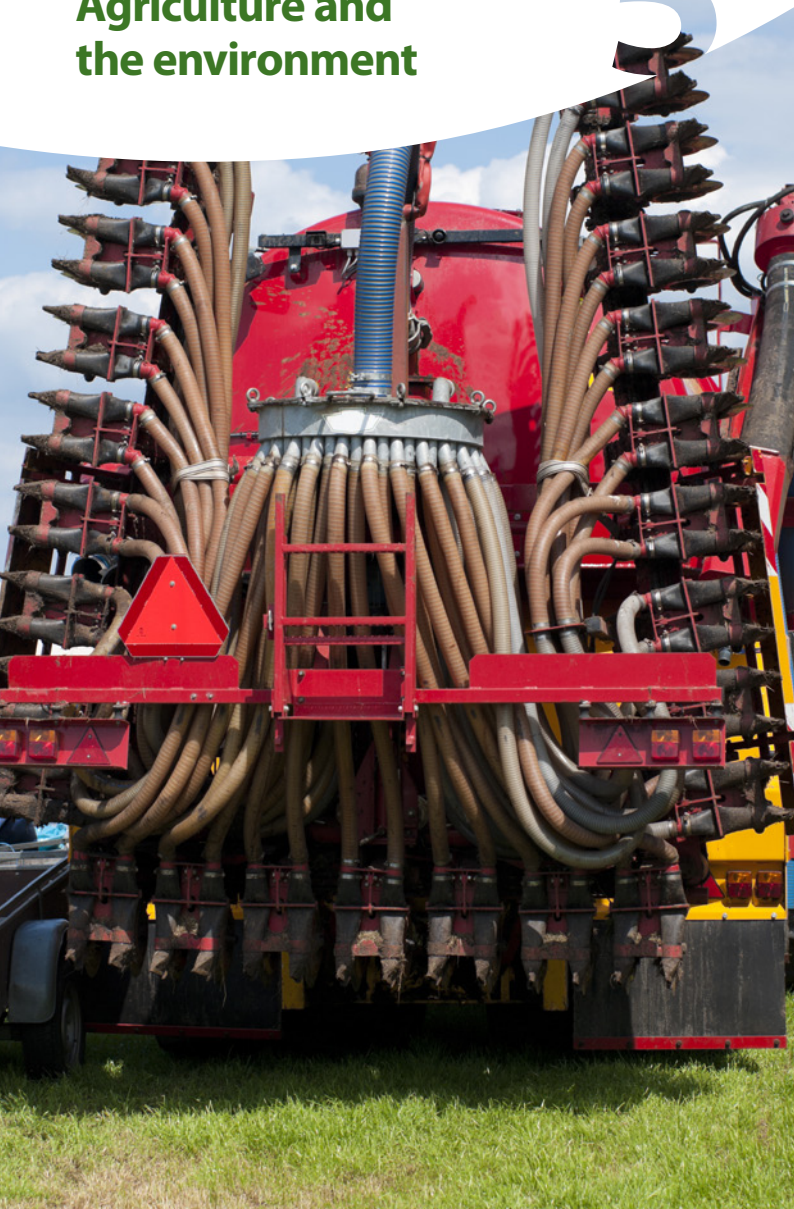
DATA SOURCES AND AVAILABILITY

Milk and milk product statistics are collected under Decision 97/80/EC, implementing Directive 96/16/EC. They cover farm production and the utilisation of milk, as well as the collection and production activity of dairies.

Due to the small number of dairy enterprises, national data are often subject to statistical confidentiality. Thus, providing EU totals in this context is a challenge and some of the information presented in the analysis is based on partial data for the Member States (which may exclude several countries); each exception is clearly footnoted under the tables and figures presented. On the one hand, statistics from these few enterprises provide early estimates on trends. On the other, a complete overview of the dairy sector requires detailed information from farms and this means that the final figures on milk production are only available at an EU level about one year after the reference year.

Dairy products are recorded in terms of weight. It is thus difficult to compare the various products (for example, fresh milk and milk powder). The quantity of whole or skimmed milk used in the dairy processes provides more comparable figures. In such a system, some quantities of used skimmed milk may acquire negative values. For instance, production of cream uses whole milk and generates skimmed milk — the production of cream is thereby expressed in relation to the quantity of used whole milk and a negative quantity of skimmed milk. Whether this skimmed milk is then used by another process or kept as such, it will be recorded as a positive quantity of used skimmed milk.

5 Agriculture and the environment



Agriculture exerts a number of pressures on the wider environment. In the process of producing food and feed, agriculture consumes a range of resources and emits various substances, with a consequential effect on the environment.

The classical boundaries of land, labour and capital as factors of production have become more elastic; indeed, agricultural production now incorporates a wide range of technological advances from medicines to genetic materials, of resources like water and energy, and of human/intellectual capital like management practices.

Through its resource use, agriculture changes rural landscapes and contributes to resource depletion and degradation. Via substance emissions into the wider environment, agriculture may contribute to a complex series of ecological impacts, including human health effects, biodiversity loss and climate change. Policy responses to environmental concerns have included the introduction of: resource use constraints and limits; emission and concentration limits; best available techniques, methods and practices. Nature conservation policies have also been implemented that set various agricultural constraints.

Agriculture is influenced by a range of EU environmental policy measures:

- The Common Agricultural Policy (CAP), with cross-compliance measures and agri-environmental and rural development regulations;
- The Water Framework Directive, including the Nitrates Directive and Groundwater Directive;
- Air related Directives (National Emission Ceilings, Air Quality and Integrated Pollution and Prevention Control);
- Climate change policies (related to the UNFCCC Kyoto Protocol);
- Nature conservation legislation, the Birds and Habitats Directives;
- Soil related policies, including the Soil Thematic Strategy, Sewage Sludge Directive, and;
- Food safety, plant protection, animal health and animal welfare regulations.

Agri-environmental indicators can be used to analyse, over time, the effects of agriculture on the environment and the interaction between the two, as well as the effectiveness and efficiency of agricultural and environmental policy measures. A Communication from the European Commission to the Council and European Parliament titled, 'The development of agri-environmental indicators for monitoring the integration of environmental concerns into the Common Agricultural Policy' (COM(2006) 508) identified 28 agri-environmental indicators (AEIs) to help with this assessment; Eurostat coordinates the work within the EEA on the development of these indicators.

Four indicators have been chosen for this pocketbook: those on greenhouse gas and ammonia emissions are among the first to have been developed, while the indicators on landscape features and manure storage have been selected as examples of the information contained in the first survey on agricultural production methods (SAPM), which was carried out together with the farm structure survey (as a census in all EU-27 Member States) in 2009/2010.

5.1 Greenhouse gas emissions from agriculture

The concentration of greenhouse gases in the atmosphere has grown mainly as a result of human activity. Greenhouse gases trap heat that would otherwise escape into space and they radiate it back towards the earth's surface: a phenomenon known as the 'greenhouse effect'. The growth of greenhouse gas emissions may be linked to rising temperatures, otherwise referred to as 'global warming'.

Some greenhouse gases, such as carbon dioxide (CO_2), occur naturally and are emitted to the atmosphere through natural processes. However, carbon dioxide emissions also result from human activities, primarily the burning of fossil fuels (oil, natural gas and coal). Some other greenhouse gases (for example, fluorinated gases) are generated and emitted solely as a result of human activities (for example, industrial processes).

Like most economic sectors, agriculture produces greenhouse gases. Agricultural emissions are generally linked to the management of agricultural soils, livestock, rice production and biomass burning. The main agricultural sources of greenhouse gas emissions are:

- enteric fermentation (flatulence) by ruminant animals such as cattle, sheep and goats, which produce methane (CH_4) emissions; enteric fermentation is a natural part of the digestive process for many ruminants as anaerobic microbes, decompose and ferment food in the rumen that are then absorbed by the ruminant; this digestion process is not 100 % efficient, so some of the food energy is lost in the form of methane; measures to mitigate enteric fermentation would not only reduce emissions, they may also raise animal productivity by increasing digestive efficiency;
- soil nitrification and denitrification, which produces nitrous oxide (N_2O) emissions; nitrification is the aerobic microbial oxidation of ammonium (NH_4) to nitrates (NO_3), whereas denitrification is the anaerobic microbial reduction of nitrates to nitrogen gas (N_2);
- manure decomposition, which produces methane and nitrous oxide emissions.

In recent years, greenhouse gas emissions from agriculture have been influenced by a number of factors: general underlying economic trends; regulatory instruments; farm management practices; and trends in the number of ruminant animals.

The reformed Common Agricultural Policy (CAP) and the Nitrates Directive have influenced emissions of greenhouse gases from the EU's agricultural sector. The decoupling of farm support from production-based mechanisms to direct area payments under the reformed CAP has acted as a break on incentives for the further intensification of agriculture, while the Nitrates Directive has led to a general reduction in the use of nitrogenous fertilisers.

There are a number of farm management practices that can potentially reduce agricultural greenhouse gas emissions. These vary in cost-effectiveness and practicality, but include: the optimisation of fertiliser application rates; the continuation of non-fertilised set-aside areas; improved feed conversion efficiency by optimising livestock diets; improved animal productivity and rumen (stomach) efficiency through the use of feed additives and breeding; better control of manure management systems to reduce the extent of anaerobic decomposition as well as the covering of manure and slurry lagoons — manure management is examined in more detail in Subchapter 5.3. Measures to reduce carbon dioxide emissions from soils or to enhance carbon sequestration include the maintenance of permanent pasture, conservation tillage, appropriate crop rotation and cover crops.

Agriculture's contribution

Agricultural activities in the EU-28 generated 464.3 million tonnes of CO_2 equivalent in 2011, corresponding to about 10 % of total greenhouse gas emissions (see Table 5.1); note that information on land use, land use change and forestry is excluded (as this heading is omitted from the measurement of greenhouse gases under the Kyoto Protocol).

Table 5.1: Greenhouse gas emissions, 2011
(million tonnes of CO_2 equivalent)

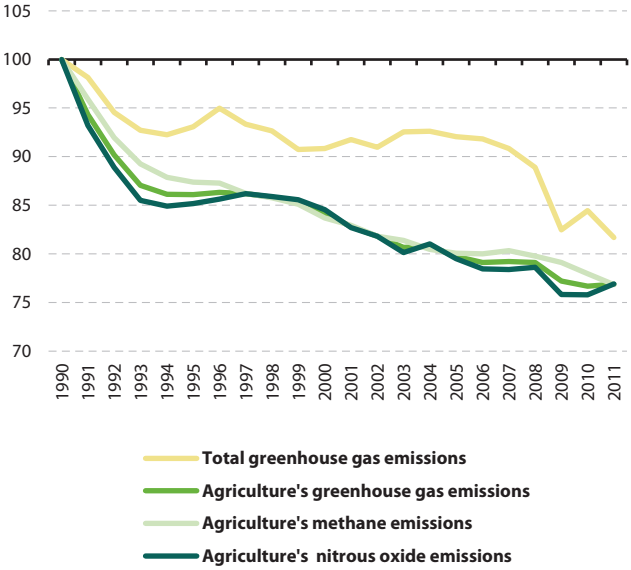
	Total greenhouse gas emissions (1)	Emissions from agriculture (2)		
		Methane (CH_4) emissions	Nitrous oxide (N_2O) emissions	Methane and nitrous oxide emissions
EU-28	4 578.5	193.5	270.8	464.3
BE	120.2	4.9	4.5	9.4
BG	66.1	2.1	4.1	6.1
CZ	133.5	2.4	5.7	8.1
DK	56.2	4.2	5.5	9.7
DE	916.5	25.7	44.7	70.4
EE	21.0	0.5	0.8	1.3
IE	57.5	10.6	7.1	17.7
EL	115.0	3.7	5.3	9.0
ES	350.5	17.8	19.5	37.3
FR	485.5	38.2	53.0	91.2
HR	28.3	1.0	2.3	3.3
IT	488.8	14.4	19.1	33.5
CY	9.2	0.3	0.4	0.7
LV	11.5	0.8	1.6	2.3
LT	21.6	1.7	3.3	5.0
LU	12.1	0.3	0.3	0.7
HU	66.1	2.8	5.9	8.8
MT	3.0	0.1	0.0	0.1
NL	194.4	9.2	6.9	16.0
AT	82.8	3.5	4.0	7.6
PL	399.4	12.1	22.8	34.9
PT	70.0	4.3	3.2	7.5
RO	123.3	8.6	10.3	18.9
SI	19.5	1.1	0.8	1.9
SK	45.3	1.0	2.2	3.1
FI	67.0	1.9	4.0	5.9
SE	61.4	2.9	4.9	7.8
UK	552.6	17.7	28.6	46.4
IS	4.4	0.3	0.4	0.6
LI	0.2	0.0	0.0	0.0
NO	53.4	2.3	2.1	4.5
CH	50.0	3.2	2.4	5.6
TR	422.4	19.0	9.8	28.8

(1) Excluding Land Use, Land Use Change and Forestry (LULUCF) net removals.
(2) Emissions from agricultural transport and energy use are excluded, as these sectors are not defined as part of the agriculture sector by the current IPCC reporting guidelines.

Source: European Environment Agency

EU-28 greenhouse gas emissions from agriculture declined by 139.7 million tonnes of CO_2 equivalents over the period between 1990 and 2011, a decline of almost one quarter (23.1 %). This was a slightly faster pace than the reduction recorded for all greenhouse gas emissions in the EU-28 (down 18.3 %), although the difference narrowed rapidly from 2008 onwards (see Figure 5.1) — reflecting the impact of the financial and economic crisis on industrial emissions and emissions linked to levels of consumption.

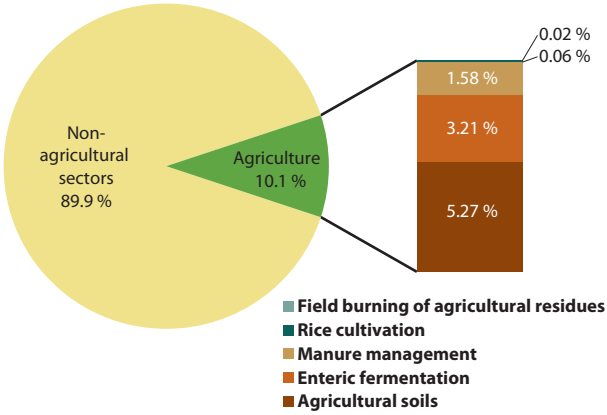
Figure 5.1: Greenhouse gas emissions, EU-28, 1990–2011
(1990=100)



Source: European Environment Agency

The vast majority of the EU-28's greenhouse gas emissions from agriculture came from one of three sources: agricultural soils (accounting for about one half of agricultural emissions), enteric fermentation (about one third) and manure management (about one sixth). The other sources of agricultural greenhouse gas emissions — field burning of agricultural residues and rice cultivation — were only minor contributors at the EU-28 level (see Figure 5.2).

Figure 5.2: Greenhouse gas emissions, EU-28, 2011 (1)
(% of total greenhouse gas emissions)



(1) Land Use, Land Use Change and Forestry (LULUCF) net removals are not included in total greenhouse gas emissions. Emissions from agricultural transport and energy use are not included in agriculture emissions, as these sectors are not defined as part of the agriculture sector by the current IPCC reporting guidelines.

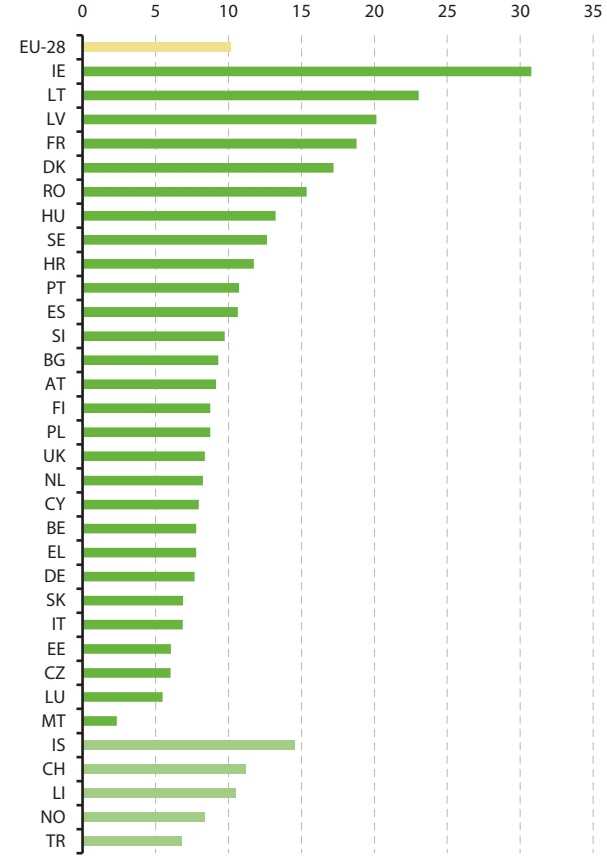
Source: European Environment Agency

The reduction in agricultural emissions of greenhouse gases may, at least in part, be attributed to an overall reduction in livestock numbers, more efficient farming practices, the reduced application of nitrogen-based fertilisers, as well as better forms of manure management. The volume of soil-related greenhouse gas emissions in the EU-28 declined by 68.3 million tonnes of CO_2 equivalents between 1990 and 2011. The volume of livestock-related greenhouse gas emissions fell by 47.8 million tonnes of CO_2 equivalents for enteric fermentation and by 23.3 million tonnes of CO_2 equivalents for manure management during the same period.

As may be expected, those EU Member States with the largest agricultural sectors tend to account for the highest greenhouse gas emissions from agriculture, reflecting their larger areas of farmland, higher levels of production, and extended livestock populations. France and Germany together contributed just over one third (34.8 %) of the EU-28's greenhouse gas emissions from agriculture in 2011. The combined emissions of the United Kingdom (10.0 %), Spain (8.0 %), Poland (7.5 %) and Italy (7.2 %) accounted for an additional third (32.8 %) of the total.

Figure 5.3 shows that agriculture accounted for a 30.8 % share of total greenhouse gas emissions in Ireland in 2011. This was the highest contribution from agriculture among any of the EU Member States and could be contrasted with a low of 2.4 % recorded in Malta. These figures reflect the relative importance of the livestock industry to Ireland's (agricultural) economy, as well as the relatively low level of greenhouse gas emissions in Ireland from other sectors (such as energy production or transport).

Figure 5.3: Greenhouse gas emissions from agriculture, 2011
(% of total greenhouse gas emissions)



Source: European Environment Agency

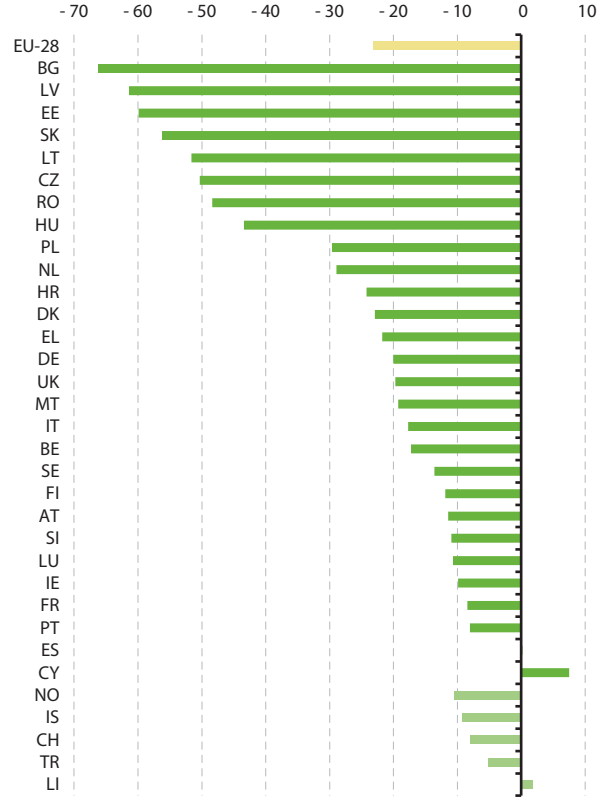
Developments in agricultural greenhouse gas emissions by Member State

Over the period from 1990 to 2011, the largest overall declines in agricultural greenhouse gas emissions were recorded in Romania (a reduction of 17.8 million tonnes of CO_2 equivalents), Germany (17.6 million tonnes of CO_2 equivalents) and Poland (14.7 million tonnes of CO_2 equivalents). The reduction in agricultural greenhouse gas emissions was sharpest in Bulgaria (-66.2 %), followed by Latvia (-61.4 %) and Estonia (-59.9 %), while Slovakia, Lithuania and the Czech Republic also cut their agricultural greenhouse gas emissions by more than half (see Figure 5.4).

By contrast, the volume of agricultural greenhouse gas emissions produced in Spain was similar in 2011 to the level recorded in 1990 (+0.2 %), while the level rose in Cyprus by 7.5 %; in both of these Member States there were marked changes in the livestock mix. In Spain, the number of cattle rose by 16.0 % during the period 1990 to 2011 (adding 700 000 head to the national herd), while the number of pigs increased by 60.7 % (an additional 9.3 million head), although there were 29.2 % fewer sheep (the national flock declining by about 7.7 million head). In the case of Cyprus, livestock numbers were consistently higher (across all types of animal) in 2011 than in 1990, with a 4.0 % increase in the number of cattle, a 14.8 % increase in the number of sheep, and a 58.0 % increase in the number of pigs.

Figure 5.4: Change in aggregated emissions of methane and nitrous oxide from agriculture, 1990–2011 (1)

(%)



(1) Field burning of agricultural residues also contributes to nitrous oxide emissions — however, this is a relatively minor source of emissions compared with the two sources illustrated.

Source: European Environment Agency

DATA SOURCES AND AVAILABILITY

The emissions data used in this publication are official national totals and sectoral greenhouse gas emissions figures submitted to the United Nations Framework Convention on Climate Change (UNFCCC), the EU's greenhouse gas monitoring mechanism and the European Environment Agency's (EAA) European environment information and observation network (EIONET).

Data for the EU are compiled and published by the European Environment Agency in their 'European Union greenhouse gas inventory' as well as their online database. Recommended methodologies for emissions data collection are compiled by the Intergovernmental Panel on Climate Change (IPCC) and released as 'Guidelines for national greenhouse gas inventories', supplemented by 'Good practice guidance and uncertainty management in national greenhouse gas inventories'.

Greenhouse gases vary in their ability to absorb and hold heat in the atmosphere. Emissions are expressed in terms of carbon dioxide equivalents (CO_2 equivalents). All greenhouse gases have what is called a global warming potential (GWP). These potentials relate to the heat-absorbing ability of each gas relative to that of carbon dioxide, as well as the decay rate of each gas (the amount removed from the atmosphere during a given number of years). By assigning a GWP to each gas, policymakers can compare the potential impact of emissions for different gases. For example, the potential effect of methane and nitrous oxide is considerably higher than that of carbon dioxide. Indeed, methane is a significant contributor to the greenhouse effect and has a GWP of 21. This means that methane is approximately 21 times more heat-absorptive than carbon dioxide per unit of weight. Nitrous oxide is 310 times more heat-absorptive than carbon dioxide per unit of weight.

Each country estimates greenhouse gas emissions by measuring the volume of specific activities (for example, livestock numbers or agricultural practices) and multiplying these by associated emission factors. International guidelines foresee these estimates being made using country-specific methods in order to improve the quality of emission estimates.

Agricultural emissions of greenhouse gases do not include those from fossil fuel combustion arising from agricultural-related processes such as transport, greenhouse heating or grain drying; these sources are inventoried under the energy section of the IPCC.

5.2 Ammonia emissions from agriculture

Ammonia (NH_3) is a colourless, pungent-smelling and corrosive gas that is produced by the decay of organic vegetable matter and from the excrement of humans and animals. When released into the atmosphere, ammonia increases the level of air pollution. Once deposited in water and soils, it can potentially cause two major types of environmental damage, acidification and eutrophication (where over-fertilisation causes oxygen depletion in water bodies as they become suffocated with weeds), both of which can harm sensitive vegetation systems, biodiversity and water quality.

The agricultural sector is currently responsible for the vast majority of ammonia emissions in the European Union (EU). Ammonia emissions from agriculture mainly occur as a result of volatilisation from livestock excreta (the vaporisation of a dissolved sample), whether this occurs from livestock housing, manure storage, urine and dung deposition in grazed pastures, or following manure spreading on agricultural land. A smaller proportion of ammonia emissions result from the volatilisation of ammonia from nitrogenous fertilisers and from fertilised crops.

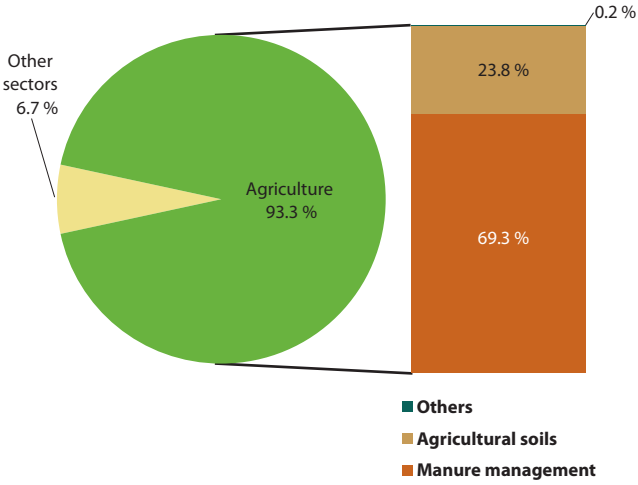
A number of steps have been taken to limit the potential impacts of ammonia emissions. The European Parliament and Council's Directive 2008/1/EC on Integrated Pollution Prevention and Control (IPPC) — until 2013 — requires industrial and agricultural activities with a high pollution potential to have a permit. This permit can only be issued if certain environmental conditions are met, so that the companies themselves bear responsibility for preventing and reducing any pollution they may cause. The Directive explicitly requires EU Member States to take measures to reduce ammonia emissions on livestock holdings that have at least 40 000 places for poultry, 2 000 places for production pigs (over 30 kg) or 750 places for sows.

The Council's Nitrates Directive 1991/676/EEC aims to protect water quality across Europe by preventing nitrates from agricultural sources polluting ground and surface waters and by promoting the use of good farming practices. The EU Member States agreed to national emissions ceiling (NEC) targets for 2010 under the European Parliament and Council's Directive 2001/81/EC, with possible further emission reductions thereafter. The purpose of these national emission ceilings was to reduce the total emissions of the four pollutants responsible for acidification, eutrophication and ground-level ozone pollution (sulphur dioxide, nitrogen oxides, volatile organic compounds and ammonia). These targets

were subsequently broadly incorporated into the parallel and international UNECE Convention on Long-Range Transboundary Air Pollutants (LRTAP) — the so-called Gothenburg Protocol; only the targets for the Czech Republic and Portugal were slightly less ambitious than under the NEC Directive.

There are two other key factors that have had an indirect impact on ammonia emissions from agriculture. The first is the EU's Common Agricultural Policy (CAP): the decoupling of subsidies under the 2005 reform of the CAP has given an added impetus to the decline in livestock numbers (for cattle and sheep in particular) as farmers are no longer paid a subsidy for every breeding animal but rather a single farm payment, and; the transition to open markets upon accession led to sharp falls in animal prices and consequent declines in livestock farming in many of the Member States that joined the EU in 2004 or 2007. The second factor is the level of meat consumption in the EU and the change in composition of meat consumption across Europe's households, which may in part be linked to economic factors (the rising price of meat) or to health issues (especially those linked to the consumption of 'red' meats).

Figure 5.5: Ammonia emissions, EU-28, 2011
(% of total ammonia emissions)



Source: European Environment Agency

Agriculture's contribution

Agricultural activities in the EU-28 resulted in the emission of 3.4 million tonnes of ammonia in 2011. This represented a decline of almost 30 % when compared with the level emitted in 1990 (see Table 5.2). Nevertheless, agriculture was still responsible for the vast majority (93.3 %) of total ammonia emissions in the EU-28 in 2011 (see Figure 5.5). Specifically, manure management (the capture, storage, treatment and use of animal manure) accounted for three quarters of agricultural ammonia emissions in the EU-28 in 2011, agricultural soil emissions accounting for the rest.

Table 5.2: Ammonia emissions from agriculture, 1990 and 2011

	Emissions		Change, 1990–2011	Share of EU-28 emissions, 2011
	1990	2011		
	(1 000 tonnes)		(%)	
EU-28	4 847.6	3 424.1	-29.4	100.0
BE	112.7	62.1	-44.8	1.8
BG	106.2	35.1	-66.9	1.0
CZ	156.0	63.0	-59.6	1.8
DK	113.5	71.3	-37.2	2.1
DE	677.6	529.0	-21.9	15.4
EE	24.0	9.7	-59.5	0.3
IE	107.1	107.2	0.1	3.1
EL	84.5	59.6	-29.5	1.7
ES	316.3	352.8	11.6	10.3
FR	672.0	656.5	-2.3	19.2
HR	43.8	30.5	-30.3	0.9
IT	457.3	361.5	-20.9	10.6
CY	5.0	4.7	-7.0	0.1
LV	46.8	11.8	-74.8	0.3
LT	83.5	29.1	-65.2	0.8
LU	5.0	4.4	-12.1	0.1
HU	120.5	58.8	-51.2	1.7
MT	1.9	1.5	-20.0	0.0
NL	334.0	101.9	-69.5	3.0
AT	60.7	58.2	-4.0	1.7
PL	498.2	264.9	-46.8	7.7
PT	51.2	41.4	-19.2	1.2
RO	272.7	141.5	-48.1	4.1
SI	19.9	16.0	-19.3	0.5
SK	63.1	23.3	-63.0	0.7
FI	35.2	33.6	-4.4	1.0
SE	49.0	44.5	-9.2	1.3
UK	330.0	250.1	-24.2	7.3
IS	5.6	5.3	-3.8	-
LI	0.3	0.2	-48.9	-
NO	23.3	24.1	3.5	-
CH	69.5	58.3	-16.1	-
TR	500.1	494.1	-1.2	-

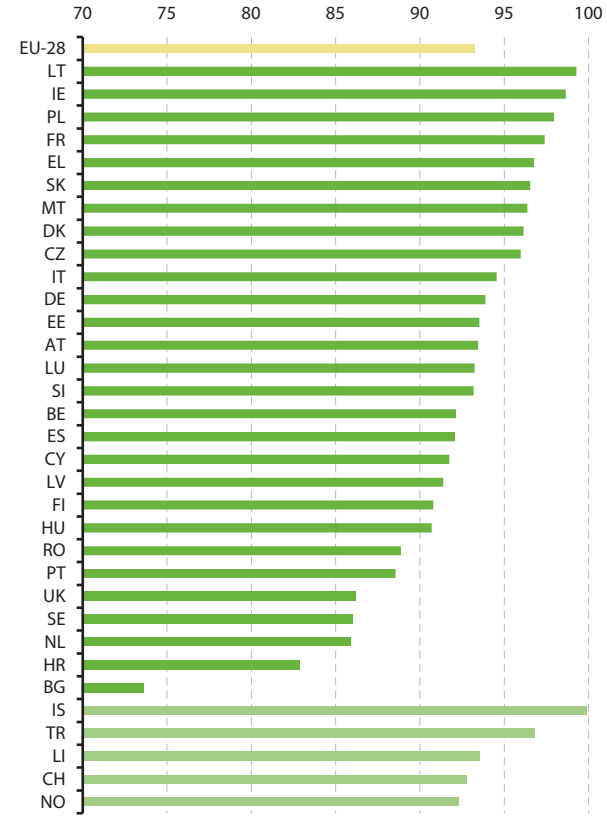
Source: European Environment Agency

Developments in ammonia gas emissions by Member State

France accounted for almost one fifth (19.2 %) of ammonia emissions from agriculture in the EU-28 in 2011, Germany accounting for the next highest proportion (15.4 %). However, the trends in emission levels between these two Member States contrasted starkly: ammonia emissions from agriculture declined by a little over one fifth (-21.9 %) in Germany between 1990 and 2011 but remained relatively unchanged (-2.3 %) throughout the period in France. Among other EU Member States, developments were even more contrasting, with declines of 60–75 % in Latvia, the Netherlands, Bulgaria, Lithuania and Slovakia, but a rise in Spain (+11.6 %). The main contributory reason for the increase in ammonia emissions from agriculture observed in Spain was the increased density of cattle, swine and poultry production. By contrast, the considerable reduction in emissions from agriculture that were recorded in the majority of countries was due mainly to changes in the management of organic manures, to the decreased use of nitrogenous fertilisers and to some reduction in livestock numbers (especially for cattle). By way of example, the considerable reduction in ammonia emissions from agriculture in the Netherlands was due principally to a change in manure management practices: manure spreading onto the surface of the soil has been phased out and replaced by either injection or 'band spreading' with a rapid incorporation of manure into the soil. Most ammonia volatilises within the first 12 hours, so speed of incorporation into the soil reduces nitrogen loss.

Agricultural activity was responsible for the majority of ammonia emissions in each of the EU Member States in 2011 (see Figure 5.6). The wider adoption of new manure management and fertiliser application practices, of dietary changes that reduce nitrogen excretion from livestock, and of more efficient use of nitrogen remain the key supply-side drivers in reducing total ammonia emissions. Nevertheless, in a few countries the reductions from other sources (such as solid waste disposal on land in Bulgaria and waste water handling in Romania) are also key to the continued overall reduction in ammonia emissions.

Figure 5.6: Ammonia emissions from agriculture, 2011 (1)
(% of total ammonia emissions)



(1) Note the y-axis starts at 70.

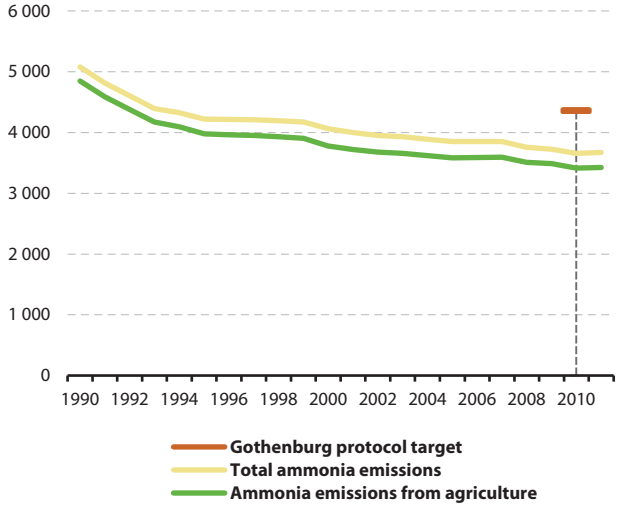
Source: European Environment Agency

Ammonia emissions' targets

The EU-28's total emissions of ammonia declined by 27.9 % between 1990 and 2010 to 3.7 million tonnes, a level below the reduced emission ceilings target of 4.4 million tonnes that was agreed for the individual EU Member States under the LRTAP Convention (see Figure 5.7 overleaf). The decline in EU-28 emissions was sharpest in the period from 1990–95 (a 16.9 % reduction). After relatively unchanged levels from 1995–99, ammonia emissions then declined relatively steadily through until 2010 before stabilising in 2011.

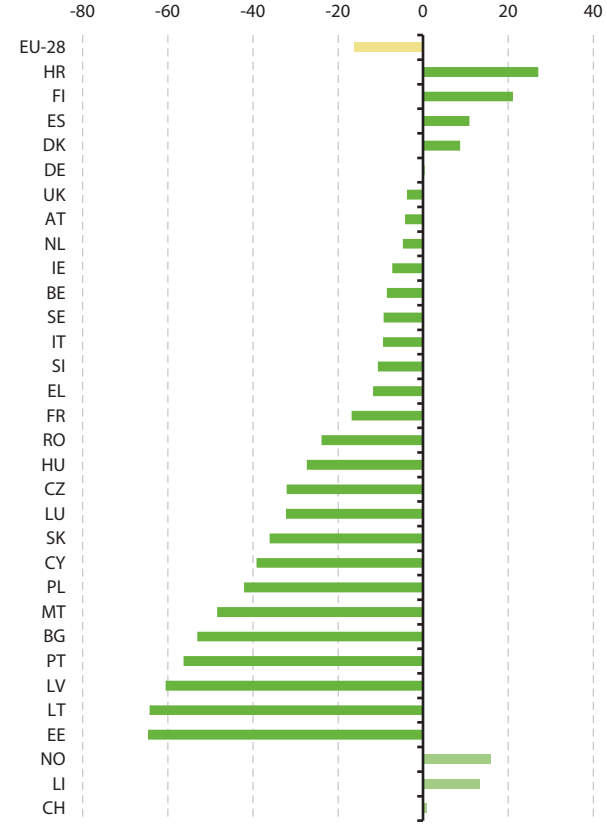
The majority of EU Member States also met their individual LRTAP targets for 2010, the principal exceptions being Denmark, Spain, Finland and Croatia (see Figure 5.8); Switzerland, Liechtenstein and Norway also fell short of their targets. The downward pressure on ammonia emissions is set to continue with ratification of a revised Gothenburg Protocol pending. The Protocol details a reduced target ceiling for the EU in 2020 that is at least 6 % less than the ammonia emission level in 2005. Some EU Member States face sharper reductions (such as Denmark -24 % and Finland -20 %) whilst others have already met their 2020 targets.

Figure 5.7: Ammonia emissions, EU-28, 1990–2011
(1 000 tonnes)



Source: European Environment Agency

Figure 5.8: Ammonia emission attaintment status, 2010
(% distance from LRTAP ceiling)



Source: European Environment Agency

DATA SOURCES AND AVAILABILITY

The ammonia emissions data used in this publication are the official national data included in the EU emissions inventory report for the period 1990–2011, collected under the UNECE convention on long-range transboundary atmospheric pollution (LRTAP convention). Supporting livestock and fertiliser use information is taken from the 2013 official national greenhouse gas data submitted to the EU's greenhouse gas monitoring mechanism and the European Environment Agency's (EAA) European environment information and observation network (EIONET). International guidelines foresee estimates of greenhouse gases being made using country-specific methods in order to improve the quality of emission estimates.

5.3 Manure storage

This subchapter presents statistics on manure storage facilities in the European Union (EU). These facilities are found on holdings (almost exclusively) with livestock and are used to store manure before its application on the farm to improve the nutrient content of the land. While manure is a valuable fertiliser if applied correctly and in the right quantities — it can be an environmental risk if applied in surplus or under the wrong conditions (for example, when the land is frozen or there is heavy rainfall).

The volume of manure produced on a farm relates, among others, to the number, breed, age and gender of livestock, types of feedstuff, climatic conditions and the time of year. Many small livestock farms do not have the land, equipment or time to recycle all of the manure that is generated on-farm. Larger farms also face difficulties in manure management practices, for example, investing in adequate resources for storage. Farmers often choose to apply manure in the spring and early autumn, so their storage facilities might need to be of sufficient size to accommodate manure collected over at least a six-month period.

Manure storage facilities and manure application are closely linked to emissions of ammonia (NH_3), nitrous oxides (N_2O) and methane (CH_4), the latter two both being greenhouse gases — see Subchapters 5.1 and 5.2 for more details. The level of emissions from manure storage facilities depends on the type of manure storage (manure as a solid, liquid, or slurry) and whether or not the manure storage facility is covered (protected from the elements). When manure is stored or treated as a liquid it decomposes anaerobically (in other words, without the need for oxygen) and can produce a significant quantity of methane; the temperature and the retention time in storage greatly affect the amount of methane produced.

While the storage of manure has environmental consequences, so too does the application of manure. When manure is applied on the land, it tends to decompose under more aerobic conditions and less methane is produced. However, ammonia emissions from manure spreading principally occur during the first 12 hours after the application of manure. Higher levels of emissions tend to be recorded when manure is not incorporated into the soil rapidly. The application of manure during heavy rainfall can result in different environmental risks, such as nitrate losses through leaching and phosphorous losses through sediment that is transported in surface run-off (leading to the pollution of ground and surface waters).

To reduce ammonia and greenhouse gas emissions and nutrient leaching and run-off to ground and surface waters, EU policies address manure storage facilities and the application of manure. The most important policies include the Nitrates Directive (Directive 0676/1991) and the Water Framework Directive 0060/2000, which aim to protect water quality across Europe by preventing nitrates from agricultural sources polluting ground and surface waters. Farmers are also encouraged to adapt their working and management practices: for example, to limit the period of time when fertilisers can be applied to the land (restricting nitrogen availability to periods when crops actually need nutrients, such as at the start of the growing season); or adopting more environmentally friendly procedures for the application of manure (in other words, avoiding the application of manure on steeply sloping ground, frozen or snow covered ground, or near water courses).

Agricultural holdings with manure storage facilities

There were 2.3 million agricultural holdings in the EU-28 that had manure storage facilities in 2010 (see Table 5.3). Some 82 % of these holdings had storage facilities for solid dung, 35 % had storage facilities for liquid manure, 26 % had slurry tanks and 5 % had slurry lagoons; note that some agricultural holdings were able to store manure in more than one of these different types of facility. Each type of storage facility has its own characteristics that a farmer must take into consideration: among others these concern differences in storage volume, odour level, potential run-off, retention of nutrient content, potential gas dangers and emissions levels, site requirements and suitability.

There are wide variations in the different types of manure storage facility used across the EU Member States:

- storage facilities for solid dung were found on a majority of holdings that had manure storage facilities in all of the EU Member States in 2010, with the exception of Belgium (just 22 %). Indeed, more than half of the Member States reported that in excess of four fifths of their farm holdings with manure storage facilities had facilities for solid dung: this share rose above 95 % in Bulgaria, Estonia, Slovakia and Romania. In Switzerland, every agricultural holding with manure storage facilities had a storage facility for solid dung and a storage facility for liquid manure;

- liquid manure storage facilities were found on a majority of agricultural holdings with storage facilities in Belgium, Lithuania and Austria (all between 60–64 %), as well as Slovenia (73 %), Poland (78 %) and the Czech Republic (80 %). By contrast, there were no liquid manure storage facilities on agricultural holdings in Luxembourg, Portugal or the United Kingdom;

Table 5.3: Holdings with manure storage facilities, 2010

	Holdings with manure storage facilities	Solid dung	Liquid manure	Slurry: tank	Slurry: lagoon
	(number)				
EU-28	2 309 410	1 890 770	812 410	595 550	123 980
BE	21 350	4 630	12 850	13 730	1 200
BG	5 230	5 050	90	70	90
CZ	10 120	7 890	8 070	880	110
DK	18 400	9 900	4 760	12 480	120
DE	184 730	144 570	60 500	118 500	8 390
EE	2 990	2 890	450	240	30
IE	91 600	53 600	22 300	66 380	2 980
EL	28 560	23 960	3 180	4 310	4 070
ES	113 810	63 600	24 220	21 640	35 170
FR	178 820	157 060	79 340	51 720	1 290
HR	97 750	85 580	19 250	2 080	13 960
IT	149 880	136 740	29 070	30 500	1 450
CY	130	120	30	20	10
LV	24 550	22 860	9 860	940	290
LT	14 420	9 320	9 190	1 360	940
LU	1 370	1 060	0	1 120	0
HU	83 500	76 550	3 550	8 480	5 830
MT	700	580	320	170	0
NL	36 940	31 130	6 910	2 130	14 660
AT	103 640	97 400	66 010	36 240	1 370
PL	482 340	339 140	376 690	140 970	16 710
PT	18 030	11 850	0	7 710	610
RO	433 250	426 400	14 760	5 640	970
SI	49 170	45 820	35 930	18 590	1 530
SK	18 330	17 880	3 670	1 060	180
FI	21 160	15 320	7 500	8 850	0
SE	39 840	36 240	13 910	9 890	0
UK	78 800	63 630	0	29 850	12 020
IS	1 860	1 740	610	130	20
NO	29 240	11 680	2 750	21 380	0
CH	59 060	59 060	59 060	45 620	4 150
ME	2 340	2 260	130	:	:

Source: Eurostat (online data code: ef_pmmanstoaa)

- slurry tanks were found on a majority of agricultural holdings with storage facilities in Germany, Belgium, Denmark, Ireland and Luxembourg (where the highest proportion was recorded, 82 %) but were uncommon in many of the other EU Member States;
- slurry lagoons were a relatively uncommon option for manure storage in most EU Member States, the highest proportion of holdings with this storage facility being in Spain (31 %) and the Netherlands (40 %).

Table 5.3: Holdings with manure storage facilities, 2010 *(cont.)*

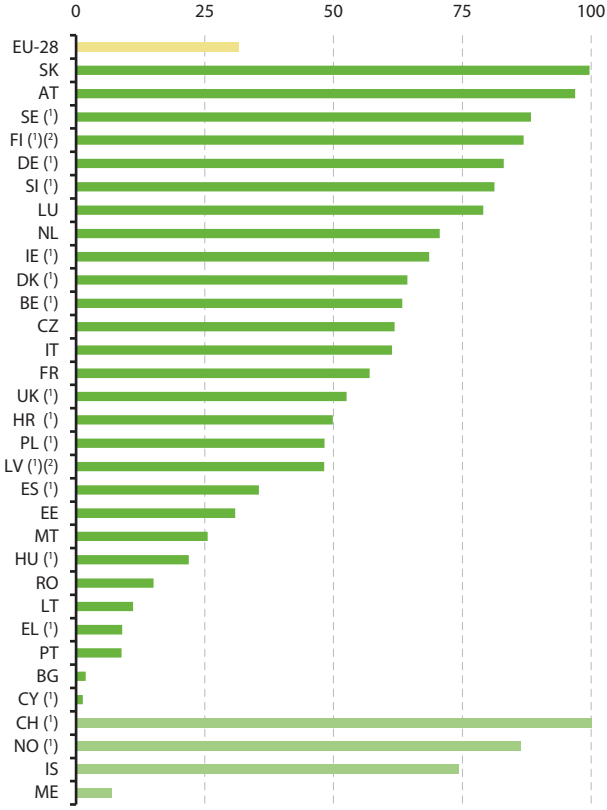
Solid dung	Liquid manure	Slurry: tank	Slurry: lagoon	
(% share of holdings with manure storage facilities)				
82	35	26	5	EU-28
22	60	64	6	BE
97	2	1	2	BG
78	80	9	1	CZ
54	26	68	1	DK
78	33	64	5	DE
97	15	8	1	EE
59	24	72	3	IE
84	11	15	14	EL
56	21	19	31	ES
88	44	29	1	FR
88	20	2	14	HR
91	19	20	1	IT
92	23	15	8	CY
93	40	4	1	LV
65	64	9	7	LT
77	0	82	0	LU
92	4	10	7	HU
83	46	24	0	MT
84	19	6	40	NL
94	64	35	1	AT
70	78	29	3	PL
66	0	43	3	PT
98	3	1	0	RO
93	73	38	3	SI
98	20	6	1	SK
72	35	42	0	FI
91	35	25	0	SE
81	0	38	15	UK
94	33	7	1	IS
40	9	73	0	NO
100	100	77	7	CH
97	6	:	:	ME

Source: Eurostat (online data code: ef_pmmanstoaa)

Livestock holdings with or without manure storage facilities

Some 32 % of agricultural holdings in the EU-28 with livestock had storage facilities for manure in 2010, equivalent to 2.2 million holdings. A relatively low proportion of livestock holdings had manure storage facilities in Cyprus, Bulgaria, Portugal, Greece, Lithuania and Romania (no more than 15 %), while 15 of the EU Member States reported that more than half of their livestock farms had manure storage facilities — this share rising to above 90 % in Austria and Slovakia (see Figure 5.9).

Figure 5.9: Livestock holdings with manure storage facilities, 2010
(% share of all livestock holdings)



(1) Based on a sample survey.
(2) Physical and economic thresholds applied; see methodological notes for more details.

Source: Eurostat (Survey on agricultural production methods and Farm structure survey)

It is important to consider the overall structure of agriculture in each of the EU Member States when analysing the proportions of livestock farms with and without storage facilities. For example, almost one in five of the EU-28's livestock farms with manure storage facilities was located in Romania (426 000 holdings in 2010). However, in relation to the total number of livestock holdings in Romania (2.8 million), the proportion of livestock farms with manure storage facilities was relatively low (15 %).

The average size of farms influences these shares too, as the proportion of livestock holdings with manure storage facilities generally rises as a function of increasing farm size: while one in five (20 %) livestock holdings in the EU-28 with very few livestock (>0 – <5 livestock units (LSU)) had manure storage facilities, more than four out of every five (81 %) holdings with more than 100 livestock units had manure storage facilities (see Table 5.4).

In Slovakia, Austria and Sweden, a high proportion of holdings of all sizes had manure storage facilities in 2010. On the other hand, in Cyprus and Bulgaria the proportion of livestock holdings with manure storage facilities was relatively low for all farm sizes, a pattern that was reproduced (albeit to a lesser degree) in Greece, Hungary, Portugal and Romania, where less than half of all livestock holdings had manure storage facilities, other than for the very largest farms (>500 livestock units).

Whether holdings with livestock but without manure storage facilities present an environmental risk depends, among others, on the number of livestock, the utilised agricultural area (UAA) for manure application, and the possibility for either selling or spreading any manure that is collected. The lack of manure storage facilities on relatively small farms is not thought to pose a considerable environmental threat: for example, less than one in ten of the livestock holdings in Bulgaria, Greece, Cyprus, Lithuania and Portugal with very few animals (>0 – 5 livestock units LSU) had manure storage facilities. On the other hand, around three quarters of the livestock holdings in Bulgaria and Cyprus with more than 500 livestock units did not have any form of manure storage facilities. This lack of facilities for farms with a relatively high number of animals could potentially lead to increased environmental risks.

As noted above, other criteria for determining the potential environmental risk associated with the manure from livestock farming include the number of animals and the agricultural area. The relationship between the number of animals and the

Table 5.4: Livestock holdings with manure storage facilities, by size of holding, 2010

	Livestock holdings (number)									
	Size of holding in livestock units									
	Total	0	> 0–< 5	5–< 10	10–< 15	15–< 20	20–< 50	50–< 100	100–< 500	>= 500
EU-28	6 943 320	65 380	4 980 060	496 850	241 880	162 470	453 170	255 560	256 550	31 400
BE (1)	33 210	60	3 050	3 820	1 660	910	5 790	6 370	10 150	1 390
BG	279 710	8 360	244 860	12 330	4 620	2 620	4 680	1 400	690	150
CZ	15 920	120	5 540	2 780	1 400	890	2 170	930	1 240	850
DK (1)	26 590	1 440	6 230	2 870	1 970	1 420	3 120	1 590	5 120	2 820
DE (1)	217 810	:	32 680	22 090	16 540	12 620	48 900	38 030	42 780	4 170
EE	9 680	940	5 810	930	410	280	640	270	270	130
IE (1)	131 630	10	16 390	18 100	13 790	11 940	38 560	20 630	11 940	260
EL (1)	283 980	4 320	210 490	17 070	11 550	9 100	22 710	6 380	2 230	130
ES (1)	256 500	2 250	96 070	24 850	17 000	13 200	44 130	28 110	25 890	4 990
FR	309 370	8 470	68 680	24 180	14 990	11 420	50 560	61 030	65 880	4 170
HR	194 090	990	157 490	19 610	6 360	3 160	4 870	1 020	510	90
IT	217 330	10 750	83 410	27 160	16 960	12 180	34 750	15 440	13 770	2 900
CY (1)	9 890	90	7 530	520	170	180	620	350	350	80
LV (1)(2)	47 590	460	34 190	6 400	2 280	1 200	2 010	610	350	80
LT	129 630	1 750	103 070	13 310	4 340	1 980	3 500	1 010	550	130
LU	1 720	:	150	110	70	60	260	380	660	20

(1) Based on a sample survey.
(2) Physical and economic thresholds applied; see methodological notes for more details.

Source: Eurostat (Survey on agricultural production methods and Farm structure survey)

Table 5.4: Livestock holdings with manure storage facilities, by size of holding, 2010 *(cont.)*

	Livestock holdings (number)									
	Size of holding in livestock units									
	Total	0	> 0–< 5	5–< 10	10–< 15	15–< 20	20–< 50	50–< 100	100–< 500	>= 500
HU (1)	380 240	6 240	345 830	14 190	4 120	2 060	4 000	1 530	1 580	690
MT	2 740	80	2 160	130	30	30	100	100	120	:
NL	50 440	30	6 330	5 230	2 890	1 950	6 640	9 030	15 770	2 580
AT	106 960	1 150	29 540	16 800	12 520	9 610	25 690	7 710	3 880	60
PL (1)	913 130	5 740	575 200	129 810	61 850	37 400	78 330	16 300	7 510	1 000
PT	203 780	1 260	167 080	11 530	5 160	3 000	8 070	4 010	3 220	460
RO	2 836 640	10 010	2 688 710	88 150	19 430	9 460	15 680	3 530	1 350	310
SI (1)	60 190	490	36 560	10 420	4 700	2 630	4 110	920	350	20
SK	18 390	60	14 950	1 080	340	210	510	290	640	320
FI (1)(2)	23 430	:	4 070	1 640	1 790	1 720	8 050	3 810	2 210	140
SE (1)	41 740	:	13 640	6 370	3 730	2 570	6 870	4 460	3 690	410
UK (1)	140 990	310	20 350	15 370	11 210	8 670	27 850	20 320	33 850	3 050
IS	2 490	:	90	110	120	120	820	840	390	10
NO (1)	32 580	80	3 320	4 120	3 670	3 240	11 180	4 390	2 530	60
CH (1)	50 990	310	4 560	5 810	5 050	4 870	20 850	6 810	2 710	30
ME	33 530	680	27 250	3 540	1 040	420	530	60	10	:

(1) Based on a sample survey.
(2) Physical and economic thresholds applied; see methodological notes for more details.

Source: Eurostat (Survey on agricultural production methods and Farm structure survey)

Table 5.4: Livestock holdings with manure storage facilities, by size of holding, 2010 *(cont.)*

	Livestock holdings with manure storage facilities (number)									
	Size of holding in livestock units									
	Total	0	> 0–< 5	5–< 10	10–< 15	15–< 20	20–< 50	50–< 100	100–< 500	>= 500
EU-28	2 195 590	2 440	977 720	234 840	137 790	102 390	314 130	193 890	207 110	25 360
BE (1)	21 040	:	700	1 760	730	560	3 150	4 740	8 140	1 250
BG	5 210	:	4 380	240	110	90	190	90	80	40
CZ	9 850	:	2 700	1 760	900	580	1 470	660	1 020	760
DK (1)	17 100	1 030	2 040	1 350	1 100	750	2 060	1 320	4 790	2 670
DE (1)	180 820	:	15 710	16 130	12 890	10 710	44 200	36 110	41 350	3 710
EE	2 990	:	1 350	320	170	130	420	210	260	130
IE (1)	90 220	10	4 930	8 350	8 450	8 580	30 740	18 160	10 790	220
EL (1)	25 480	30	8 700	3 040	2 520	2 470	5 710	2 010	900	90
ES (1)	91 070	100	18 060	8 510	6 520	5 590	20 640	13 240	14 380	4 020
FR	176 270	90	15 480	10 080	7 410	6 180	32 800	46 670	53 970	3 580
HR	96 730	40	72 080	13 310	4 220	2 070	3 660	880	410	70
IT	133 280	170	45 410	18 130	11 280	8 000	23 560	12 120	12 140	2 460
CY (1)	130	:	10	:	10	:	20	10	50	20
LV (1)(2)	22 940	20	14 260	3 940	1 560	830	1 450	490	320	70
LT	14 370	:	7 680	2 220	1 060	620	1 610	650	430	110
LU	1 360	:	50	50	40	30	190	350	640	20

(1) Based on a sample survey.
(2) Physical and economic thresholds applied; see methodological notes for more details.

Source: Eurostat (Survey on agricultural production methods and Farm structure survey)

Table 5.4: Livestock holdings with manure storage facilities, by size of holding, 2010 *(cont.)*

	Livestock holdings with manure storage facilities (number)									
	Size of holding in livestock units									
	Total	0	> 0–< 5	5–< 10	10–< 15	15–< 20	20–< 50	50–< 100	100–< 500	>= 500
HU (1)	83 220	20	71 770	5 310	1 770	840	1 710	620	730	460
MT	700	:	320	70	20	20	70	90	110	:
NL	35 630	20	2 360	2 770	1 880	1 380	5 130	7 770	12 800	1 540
AT	103 640	330	27 330	16 660	12 470	9 590	25 630	7 700	3 870	60
PL (1)	440 750	380	217 960	65 350	40 200	28 100	68 040	14 730	5 420	560
PT	17 990	:	8 560	1 910	1 210	780	2 470	1 590	1 180	290
RO	426 280	60	378 210	30 880	6 720	3 300	5 230	1 220	520	160
SI (1)	48 910	60	25 970	10 170	4 700	2 630	4 110	920	350	20
SK	18 330	10	14 950	1 080	340	210	510	290	640	320
FI (1)(2)	20 360	:	1 850	1 280	1 610	1 650	7 850	3 780	2 190	140
SE (1)	36 870	:	10 770	5 220	3 420	2 370	6 610	4 440	3 630	410
UK (1)	74 050	70	4 130	4 950	4 480	4 330	14 900	13 030	26 000	2 180
IS	1 850	:	40	70	80	80	570	670	340	10
NO (1)	28 140	:	1 720	3 240	3 250	2 980	10 390	4 170	2 340	40
CH (1)	50 990	310	4 560	5 810	5 050	4 870	20 850	6 810	2 710	30
ME	2 340	:	1 720	360	120	60	60	10	:	:

(1) Based on a sample survey.
(2) Physical and economic thresholds applied; see methodological notes for more details.

Source: Eurostat (Survey on agricultural production methods and Farm structure survey)

Table 5.4: Livestock holdings with manure storage facilities, by size of holding, 2010 *(cont.)*

	Livestock holdings with manure storage facilities (% of all livestock holdings)									
	Size of holding in livestock units									
	Total	0	> 0–< 5	5–< 10	10–< 15	15–< 20	20–< 50	50–< 100	100–< 500	>= 500
EU-28	32	4	20	47	57	63	69	76	81	81
BE (1)	63	:	23	46	44	62	54	74	80	90
BG	2	:	2	2	2	3	4	6	12	27
CZ	62	:	49	63	64	65	68	71	82	89
DK (1)	64	72	33	47	56	53	66	83	94	95
DE (1)	83	:	48	73	78	85	90	95	97	89
EE	31	:	23	34	41	46	66	78	96	100
IE (1)	69	100	30	46	61	72	80	88	90	85
EL (1)	9	1	4	18	22	27	25	32	40	69
ES (1)	36	4	19	34	38	42	47	47	56	81
FR	57	1	23	42	49	54	65	76	82	86
HR	50	4	46	68	66	66	75	86	80	78
IT	61	2	54	67	67	66	68	78	88	85
CY (1)	1	:	0	:	6	:	3	3	14	25
LV (1)(2)	48	4	42	62	68	69	72	80	91	88
LT	11	:	7	17	24	31	46	64	78	85
LU	79	:	33	45	57	50	73	92	97	100

(1) Based on a sample survey.
(2) Physical and economic thresholds applied; see methodological notes for more details.

Source: Eurostat (Survey on agricultural production methods and Farm structure survey)

Table 5.4: Livestock holdings with manure storage facilities, by size of holding, 2010 *(cont.)*

	Livestock holdings with manure storage facilities (% of all livestock holdings)									
	Size of holding in livestock units									
	Total	0	> 0–< 5	5–< 10	10–< 15	15–< 20	20–< 50	50–< 100	100–< 500	>= 500
HU (1)	22	0	21	37	43	41	43	41	46	67
MT	26	:	15	54	67	67	70	90	92	:
NL	71	67	37	53	65	71	77	86	81	60
AT	97	29	93	99	100	100	100	100	100	100
PL (1)	48	7	38	50	65	75	87	90	72	56
PT	9	:	5	17	23	26	31	40	37	63
RO	15	1	14	35	35	35	33	35	39	52
SI (1)	81	12	71	98	100	100	100	100	100	100
SK	100	17	100	100	100	100	100	100	100	100
FI (1)(2)	87	:	45	78	90	96	98	99	99	100
SE (1)	88	:	79	82	92	92	96	100	98	100
UK (1)	53	23	20	32	40	50	54	64	77	71
IS	74	:	44	64	67	67	70	80	87	100
NO (1)	86	:	52	79	89	92	93	95	92	67
CH (1)	100	100	100	100	100	100	100	100	100	100
ME	7	:	6	10	12	14	11	17	:	:

(1) Based on a sample survey.
(2) Physical and economic thresholds applied; see methodological notes for more details.

Source: Eurostat (Survey on agricultural production methods and Farm structure survey)

Table 5.5: Livestock holdings without manure storage facilities, by size of holding, 2010 (1)

	Livestock holdings without manure storage facilities (number)									
	Size of holding in hectares									
	Total	0	>0–< 2	2–< 5	5–< 10	10–< 20	20–< 30	30–< 50	50–< 100	>= 100
EU-28	4 747 740	201 590	2 574 770	942 000	465 690	253 670	85 650	78 700	77 030	68 690
BE (2)	12 170	230	950	2 250	1 750	1 500	1 510	880	2 380	730
BG	274 500	12 720	223 120	21 250	7 040	4 220	1 710	1 640	1 440	1 360
CZ	6 070	170	370	390	1 360	1 240	620	600	640	690
DK (2)	9 500	170	60	400	3 010	2 300	1 060	1 020	790	680
DE (2)	36 990	660	1 040	2 610	11 010	9 220	3 380	3 320	2 990	2 760
EE	6 690	110	700	1 420	1 460	1 390	600	430	330	250
IE (2)	41 410	10	1 210	3 810	7 690	12 120	6 640	5 910	3 070	950
EL (2)	258 500	3 340	94 620	76 090	42 450	23 840	7 770	6 040	3 300	1 050
ES (2)	165 420	12 590	36 010	31 980	20 510	16 480	8 870	10 610	12 720	15 660
FR	133 100	5 350	17 070	23 260	15 320	13 980	8 310	11 880	19 060	18 880
HR	97 350	50	56 060	21 200	12 010	4 730	1 390	1 050	670	190
IT	84 050	3 390	22 170	15 490	11 340	10 660	5 720	6 330	5 780	3 170
CY (2)	9 770	310	4 720	2 350	1 040	620	270	270	140	50
LV (2)(3)	24 650	10	40	220	12 530	7 720	1 930	1 030	700	460
LT	115 260	220	15 340	48 560	26 360	14 510	4 220	3 060	2 000	1 000

(1) There are differences in the classification of common land between the countries; see methodological notes for more details.
(2) Based on a sample survey.
(3) Physical and economic thresholds applied; see methodological notes for more details.

Source: Eurostat (Survey on agricultural production methods and Farm structure survey)

Table 5.5: Livestock holdings without manure storage facilities, by size of holding, 2010 (1) *(cont.)*

	Livestock holdings without manure storage facilities (number)									
	Size of holding in hectares									
	Total	0	>0–< 2	2–< 5	5–< 10	10–< 20	20–< 30	30–< 50	50–< 100	>= 100
LU	360	20	10	50	70	50	30	50	60	20
HU (2)	297 020	28 860	214 720	22 370	12 370	8 160	3 140	2 950	2 470	1 980
MT	2 040	190	1 570	230	50	:	:	:	:	:
NL	14 810	760	2 080	3 640	2 710	2 230	1 110	1 220	840	220
AT	3 320	80	720	1 260	590	360	110	100	80	30
PL (2)	472 380	6 130	90 520	151 910	134 590	70 990	10 940	4 570	1 840	890
PT	185 790	950	95 050	46 990	18 890	10 590	3 650	3 000	2 490	4 180
RO	2 410 360	124 500	1 689 820	453 800	104 840	22 750	4 900	4 000	3 060	2 690
SI (2)	11 280	40	4 810	4 670	1 480	240	20	10	:	:
SK	60	:	30	10	10	:	:	:	:	:
FI (2)(3)	3 080	50	30	560	380	770	460	400	300	130
SE (2)	4 870	40	0	720	1 450	1 320	510	300	290	250
UK (2)	66 940	640	1 930	4 510	13 380	11 680	6 780	8 030	9 590	10 420
IS	640	20	:	:	:	10	20	30	70	500
NO (2)	4 430	230	230	660	1 120	1 180	490	330	160	40

(1) There are differences in the classification of common land between the countries; see methodological notes for more details.
(2) Based on a sample survey.
(3) Physical and economic thresholds applied; see methodological notes for more details.

Source: Eurostat (Survey on agricultural production methods and Farm structure survey)

Table 5.5: Livestock holdings without manure storage facilities, by size of holding, 2010 (1) *(cont.)*

	Average number of livestock units (number)									
	Size of holding in hectares									
	Total	0	>0–< 2	2–< 5	5–< 10	10–< 20	20–< 30	30–< 50	50–< 100	>= 100
EU-28	7.2	22.5	1.5	3.4	6.6	13.2	24.2	34.1	55.2	105.1
BE (2)	59.4	193.6	24.8	9.7	19.6	60.4	64.0	73.8	114.0	102.6
BG	3.7	13.9	1.8	4.8	7.5	13.5	18.4	21.7	29.8	79.1
CZ	45.7	840.5	2.5	5.3	9.0	9.7	11.1	15.8	25.2	108.3
DK (2)	35.3	261.2	16.0	11.7	7.3	18.6	14.0	28.8	64.7	184.0
DE (2)	39.1	806.4	11.6	15.5	7.6	13.9	21.3	37.0	55.6	104.4
EE	4.5	7.8	0.8	1.1	1.8	3.1	5.1	8.5	15.4	34.7
IE (2)	21.6	2.0	9.5	7.6	8.2	12.4	20.1	36.5	67.9	87.8
EL (2)	6.2	37.5	2.9	3.6	5.7	10.3	15.3	23.1	37.2	63.4
ES (2)	34.2	98.9	9.3	9.5	16.2	26.7	33.9	42.3	47.8	104.5
FR	35.1	83.7	4.6	7.1	9.8	15.5	24.3	38.6	59.6	96.2
HR	3.2	357.4	1.1	2.4	5.0	8.7	30.7	15.2	20.0	49.1
IT	22.6	64.8	6.3	15.3	17.9	20.5	30.4	31.1	40.0	87.0
CY (2)	21.0	270.3	3.6	9.5	16.2	28.7	44.1	61.9	95.9	113.4
LV (2)(3)	4.9	2 037.0	4.0	5.3	1.9	3.0	5.8	10.4	17.9	35.8
LT	3.7	53.8	1.0	1.7	2.9	5.1	8.7	15.1	19.3	39.5

(1) There are differences in the classification of common land between the countries; see methodological notes for more details.
(2) Based on a sample survey.
(3) Physical and economic thresholds applied; see methodological notes for more details.

Source: Eurostat (Survey on agricultural production methods and Farm structure survey)

Table 5.5: Livestock holdings without manure storage facilities, by size of holding, 2010 (1) *(cont.)*

	Average number of livestock units (number)									
	Size of holding in hectares									
	Total	0	>0–< 2	2–< 5	5–< 10	10–< 20	20–< 30	30–< 50	50–< 100	>= 100
LU	36.5	16.0	2.0	3.8	13.4	13.2	21.7	32.0	64.2	245.5
HU (2)	3.9	11.6	1.3	3.4	5.1	7.6	8.6	12.5	25.8	104.2
MT	2.5	7.3	1.6	3.5	6.4	:	:	:	:	:
NL	127.6	364.1	128.9	70.8	104.8	128.2	144.5	143.3	176.0	157.1
AT	2.6	5.9	0.7	1.0	2.3	3.3	6.3	10.9	15.3	28.0
PL (2)	5.9	41.8	1.9	2.5	4.9	9.8	18.6	30.8	80.9	154.8
PT	6.7	107.9	1.4	2.5	4.6	9.7	15.7	28.0	36.3	112.1
RO	1.5	1.9	0.9	2.0	3.8	8.2	15.1	20.0	26.9	71.8
SI (2)	1.2	3.5	0.7	1.4	1.9	2.2	2.5	2.0	:	:
SK	:	:	:	:	:	:	:	:	:	:
FI (2)(3)	7.5	12.2	2.3	4.7	4.6	5.0	6.4	9.4	13.7	25.9
SE (2)	9.1	132.3	:	3.0	3.7	8.6	7.9	13.8	18.8	25.5
UK (2)	55.6	320.1	21.1	26.2	15.0	19.3	42.5	42.4	80.1	147.5
IS	51.7	187.0	:	:	:	13.0	13.0	18.0	37.7	51.3
NO (2)	23.5	67.7	7.9	7.7	10.3	20.7	25.7	47.5	87.5	83.0

(1) There are differences in the classification of common land between the countries; see methodological notes for more details.
(2) Based on a sample survey.
(3) Physical and economic thresholds applied; see methodological notes for more details.

Source: Eurostat (Survey on agricultural production methods and Farm structure survey)

Table 5.5: Livestock holdings without manure storage facilities, by size of holding, 2010 (1) *(cont.)*

	Livestock density (average number of livestock units per hectare)								
	Size of holding in hectares								
	Total	>0–< 2	2–< 5	5–< 10	10–< 20	20–< 30	30–< 50	50–< 100	>= 100
EU-28	0.9	2.3	1.1	1.0	1.0	1.0	0.9	0.8	0.4
BE (2)	1.9	>10	2.9	2.5	4.3	2.7	1.7	1.7	0.7
BG	1.0	3.8	1.6	1.1	1.0	0.8	0.6	0.4	0.2
CZ	0.8	2.5	1.7	1.3	0.7	0.5	0.4	0.4	0.3
DK (2)	1.0	>10	3.2	1.0	1.3	0.6	0.7	0.9	0.8
DE (2)	1.1	9.6	4.4	1.1	1.0	0.9	1.0	0.8	0.4
EE	0.2	0.7	0.3	0.3	0.2	0.2	0.2	0.2	0.1
IE (2)	0.9	7.9	2.1	1.1	0.8	0.8	0.9	1.0	0.5
EL (2)	0.9	3.2	1.1	0.8	0.7	0.6	0.6	0.6	0.4
ES (2)	0.9	9.0	3.0	2.3	1.9	1.4	1.1	0.7	0.4
FR	0.8	4.5	2.2	1.4	1.1	1.0	1.0	0.8	0.6
HR	0.8	1.5	0.7	0.7	0.6	1.3	0.4	0.3	0.2
IT	1.1	7.4	4.8	2.5	1.5	1.3	0.8	0.6	0.5
CY (2)	3.5	4.5	2.9	2.4	2.1	1.9	1.6	1.5	0.8
LV (2)(3)	0.3	4.0	1.3	0.3	0.2	0.2	0.3	0.3	0.1
LT	0.4	0.7	0.5	0.4	0.4	0.4	0.4	0.3	0.2

(1) There are differences in the classification of common land between the countries; see methodological notes for more details.
(2) Based on a sample survey.
(3) Physical and economic thresholds applied; see methodological notes for more details.

Source: Eurostat (Survey on agricultural production methods and Farm structure survey)

Table 5.5: Livestock holdings without manure storage facilities, by size of holding, 2010 (1) *(cont.)*

	Livestock density (average number of livestock units per hectare)								
	Size of holding in hectares								
	Total	>0–< 2	2–< 5	5–< 10	10–< 20	20–< 30	30–< 50	50–< 100	>= 100
LU	1.0	2.0	1.1	2.0	0.9	0.8	0.8	1.0	1.0
HU (2)	0.9	4.0	1.1	0.7	0.5	0.4	0.3	0.4	0.3
MT	2.5	2.6	1.2	0.9	:	:	:	:	:
NL	8.2	>10	>10	>10	8.9	5.9	3.7	2.6	1.0
AT	0.3	0.5	0.3	0.3	0.2	0.3	0.3	0.2	0.2
PL (2)	0.8	1.4	0.8	0.7	0.7	0.8	0.8	1.2	0.5
PT	0.5	1.3	0.8	0.7	0.7	0.6	0.7	0.5	0.3
RO	0.8	1.5	0.7	0.6	0.6	0.6	0.5	0.4	0.2
SI (2)	0.4	0.7	0.4	0.3	0.2	0.1	0.1	:	:
SK	:	:	:	:	:	:	:	:	:
FI (2)(3)	0.3	2.3	1.3	0.6	0.3	0.3	0.2	0.2	0.2
SE (2)	0.4	:	0.8	0.5	0.6	0.3	0.4	0.3	0.1
UK (2)	0.7	>10	7.7	2.1	1.3	1.8	1.1	1.1	0.4
IS	0.1	:	:	:	0.9	0.7	0.5	0.5	0.1
NO (2)	1.5	7.6	2.1	1.4	1.4	1.1	1.3	1.2	0.6

(1) There are differences in the classification of common land between the countries; see methodological notes for more details.
(2) Based on a sample survey.
(3) Physical and economic thresholds applied; see methodological notes for more details.

Source: Eurostat (Survey on agricultural production methods and Farm structure survey)

(potential) agricultural area available for manure spreading/application are combined in an indicator for livestock density (the stock of animals per hectare of utilised agricultural area). More intensive forms of livestock farming, with relatively high livestock density, are more likely to be faced with environmental risks, insofar as they will probably need to either store or export (remove) manure from the farm. As such, agricultural holdings with higher livestock densities might be expected to have a higher propensity for manure storage facilities than those holdings with lower livestock densities. The average livestock density of holdings across the EU-28 with manure storage facilities was, at 1.5 livestock units per hectare of utilised agricultural area in 2010, higher than that for holdings without manure storage facilities (0.9).

Table 5.5 shows the number of livestock holdings with no manure storage facilities, the average number of livestock units and the livestock density on these holdings. In most of the EU Member States, the average livestock density for all sizes of livestock holding without manure storage facilities was relatively low (<=1 livestock unit per hectare). By contrast, Germany, Italy, Belgium, Malta, Cyprus and the Netherlands each reported livestock densities for holdings with no manure storage facilities above this threshold.

While at first sight these relatively high figures for livestock density in agricultural holdings with no manure storage facilities could be seen as a potential risk to the environment, the Netherlands (as well as, to a somewhat lesser degree, Belgium and Germany) has made considerable efforts (through law) to oblige farmers to adapt their manure management and application techniques — with the aim of minimising emissions and water pollution — for example, through injection or 'band spreading' which result in the rapid incorporation of manure into the soil. Furthermore, transport infrastructure systems and pipelines have been developed to remove manure from the farm or redistribute it elsewhere.

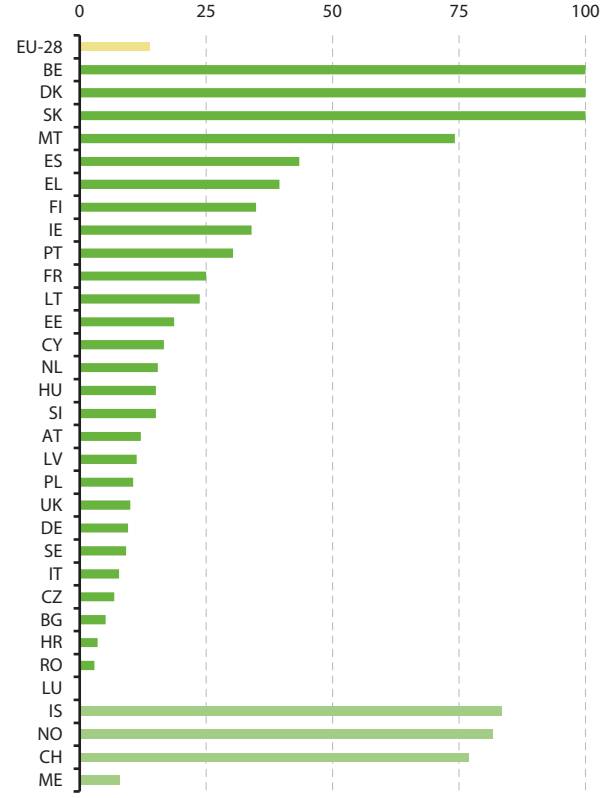
Covered manure storage facilities

Covered manure storage facilities prevent, to some degree, ammonia emissions and nutrient leaching or run-off into surface and ground waters. In the EU-28 in 2010, only 14 % of the agricultural holdings with manure storage facilities for solid dung used a covered storage facility, in contrast to 69 % of holdings with manure storage facilities for slurry and 87 % of holdings with manure storage facilities for liquid manure (see Figures 5.10–5.12).

In Belgium, Denmark and Slovakia all of the agricultural holdings with manure storage facilities for solid dung used a cover in 2010. By contrast, there were no agricultural holdings in Luxembourg with manure storage facilities for solid dung using a cover.

Figure 5.10: Holdings with covered manure storage facilties for solid dung, 2010

(% share of all holdings with manure storage facilities for solid dung)

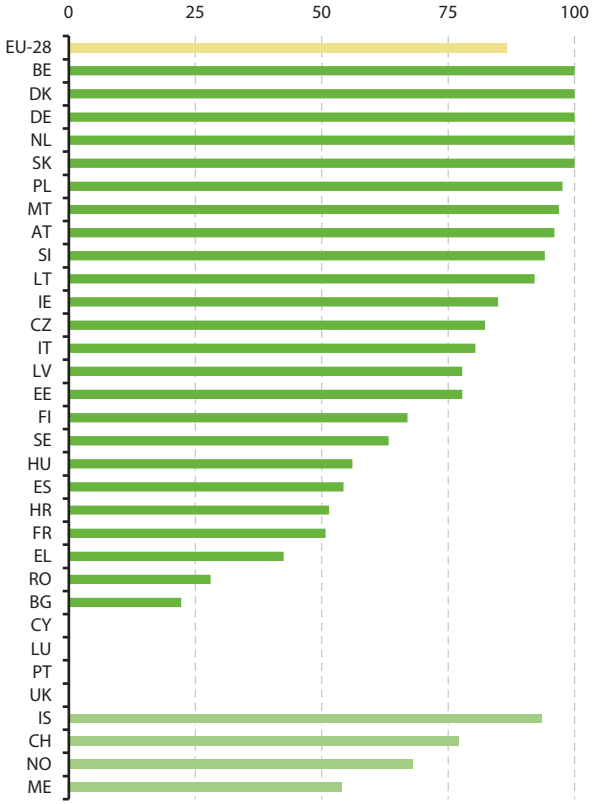


Source: Eurostat (ef_pmmanstoaa)

Belgium, Denmark and Slovakia also reported that all of their agricultural holdings with manure storage facilities for liquid manure used a cover, as did Germany and the Netherlands. By contrast, only about a quarter of the storage facilities for liquid manure in Bulgaria (22 %) and Romania (28 %) used a cover. Note that there were no or very few storage facilities for liquid manure in Cyprus, Luxembourg, Portugal and the United Kingdom.

Figure 5.11: Holdings with covered manure storage facilties for liquid manure, 2010 (1)

(% share of all holdings with manure storage facilities for liquid manure)



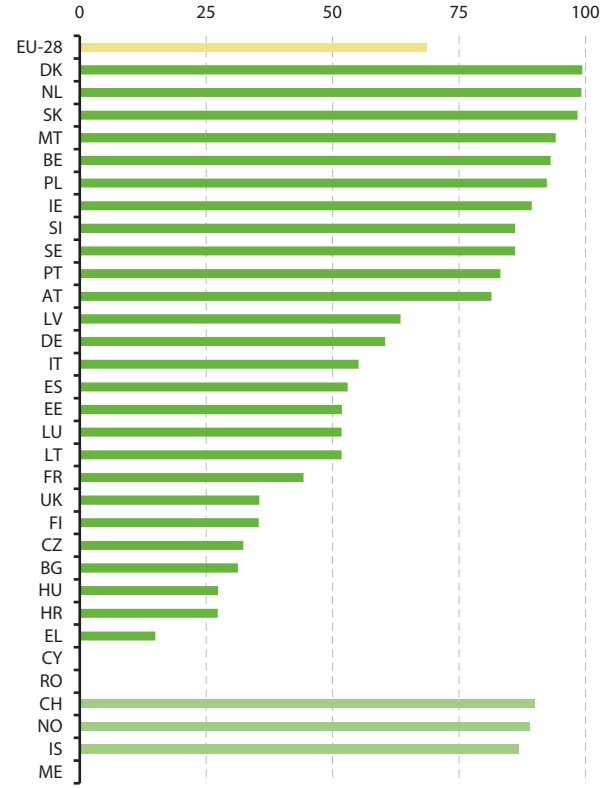
(1) Luxembourg, Portugal and the United Kingdom: no manure storage facilities for liquid manure; Cyprus: no covered manure storage facilities for liquid manure..

Source: Eurostat (online data code: ef_pmmanstoaa)

Almost all (>90 %) of the agricultural holdings with manure storage facilities for slurry used a cover in 2010 in Belgium, Denmark, the Netherlands and Slovakia, as well as Malta and Poland. There were very few storage facilities for slurry in Cyprus, while none of the agricultural holdings with manure storage facilities for slurry used a cover in Romania.

Figure 5.12: Holdings with covered manure storage facilties for slurry, 2010 (1)

(% share of all holdings with manure storage facilities for slurry)



(1) Montenegro: no manure storage facilities for slurry; Cyprus and Romania: no covered manure storage facilities for slurry.

Source: Eurostat (online data code: ef_pmmanstoaa)

DATA SOURCES AND AVAILABILITY

Manure management indicators are derived from data collected in the farm structure survey (FSS) and a survey on agricultural production methods (SAPM). The SAPM was carried out together with the FSS census in some of the EU Member States in 2010, while in others it was carried out as a sample survey and data were linked to those from the census at the level of the individual holding to enable cross-comparisons of characteristics collected under the two surveys.

Manure storage is one of 28 agri-environmental indicators established by the European Commission within a Communication titled, 'Development of agri-environmental indicators for monitoring the integration of environmental concerns into the Common Agricultural Policy' (COM final 508/2006).

Belgium, Denmark, Germany, Ireland, Greece, Spain, Croatia, Cyprus, Latvia, Hungary, Poland, Slovenia, Finland, Sweden, the United Kingdom, Norway and Switzerland carried out the SAPM as a sample survey; results are extrapolated from the holdings included in the SAPM sample.

Higher thresholds (than the FSS) were used for physical and economic thresholds (five hectares for the UAA, one hectare for permanent crops, 10 head of cattle, 50 head of pigs, 20 head of sheep, 20 head of goats, 1 000 head of poultry; an economic threshold for the standard output (>EUR 4 000) was applied if none of the physical thresholds were met. In Finland a threshold for standard output (>=EUR 1 200) was applied.

When analysing data on livestock units and livestock densities by size of holding (in UAA) there are sometimes considerable differences in the treatment of common land. Livestock density for holdings with livestock by size of UAA will be lower when common land is included in the holding making use of the area than when the area is included in a special holding or in a common land holding.

For more information on the SAPM methodology, refer to: http://epp.eurostat.ec.europa.eu/statistics_explained/index.php?title=Survey_on_agricultural_production_methods&stable=0.

5.4 Landscape features

Many of the landscape features associated with agriculture, such as hedges, stone walls, tree lines, ditches and other watercourses, are the result of historical farming practices and human endeavour. In many countries, the open field system of farming on land that was typical centuries ago was replaced by a system of enclosures. This reorganisation of land resulted in visible demarcation barriers — often using the natural resources available locally — denoting areas belonging to private landowners and other local boundaries, as well as practical barriers for keeping livestock under control). In a number of other countries, landscape features were used or built to increase cultivated land areas (such as walls for terraces) and as a barrier to prevent grazing in specific areas (such as in olive groves or vineyards). The choice of feature was often a function of the climatic conditions (hedges being very difficult to grow in dry conditions and ditches being useful to drain rain soaked fields) and geology (rocks and stones being prevalent in some landscapes but not others).

Over time, these linear features developed to provide a number of other functions, such as: shelter and shade for farm animals and shelter for crops from possible wind damage; wildlife habitats and nature corridors; firewood, coppice wood (such as for fencing, poles, baskets and charcoal), wild berries and small game for some of the rural population, and; a natural barrier to restrict soil and water movement thus reducing soil erosion and protecting water quality.

As farming systems became more intensive and mechanised, the margins of fields were often grubbed up or destroyed to allow more efficient use of the land by ever larger and more specialised machines. However, these landscape features have become recognised as an increasingly important resource for the environment. Indeed, under the current Common Agricultural Policy (CAP), in order to receive a full decoupled direct payment, a farmer has to comply with good agricultural and environmental condition (GAEC) standards. The objective of these standards is to ensure that all agricultural land, especially land which is no longer used for production purposes and permanent pasture, is maintained in good condition. Under Council Regulation (EC) 73/2009, the maintenance of landscape features, including, where appropriate, hedges, ponds, ditches, trees in line, in group or isolated, and field margins is specified as a compulsory GAEC standard, whereby farmers should ensure minimum levels of maintenance and avoid the deterioration of habitats.

Hedges, tree lines and stone walls

Landscape features are found on many of the farms in the European Union (EU) (see Table 5.6):

- almost one million agricultural holdings in the EU-28 maintained hedges (about one in every twelve holdings) in the three years prior to the 2010 survey;
- almost three quarters of a million holdings maintained tree lines;
- a little over two thirds of a million holdings maintained stone walls;
- about 150 000 holdings established new hedges, a similar number planted new tree lines, and about 90 000 holdings built new stone walls.

Note that agricultural holdings can both maintain and establish multiple landscape features.

Hedges are a common feature of the British and Irish landscape, where enclosing common land for raising sheep became a feature of the 18th and 19th century enclosure movement. About three quarters of all agricultural holdings in the United Kingdom (77.4 %) and Ireland (74.1 %) maintained hedges in the three years prior to the 2010 survey, with about one in every six or seven holdings also involved in establishing new hedges; these were by far the highest proportions across the EU Member States (see Figure 5.13 overleaf). By contrast, hedge maintenance was not an activity carried out on farms in the Czech Republic, Lithuania, Malta, Romania, Slovakia, Finland or Sweden. This disparity within the EU is underlined at a regional level (principally for NUTS level 2 regions); in England, Wales, Northern Ireland, Ireland, the south of Belgium, and the west and centre of France a clear majority (at least 57.1 %) of holdings maintained hedges (see Map 5.1 overleaf). These were more or less the same NUTS level 2 regions where new hedges were most likely to have been established in the three years prior to the 2010 survey (see Map 5.2).

Table 5.6: Agricultural holdings that maintained or established linear elements, 2010 (1)

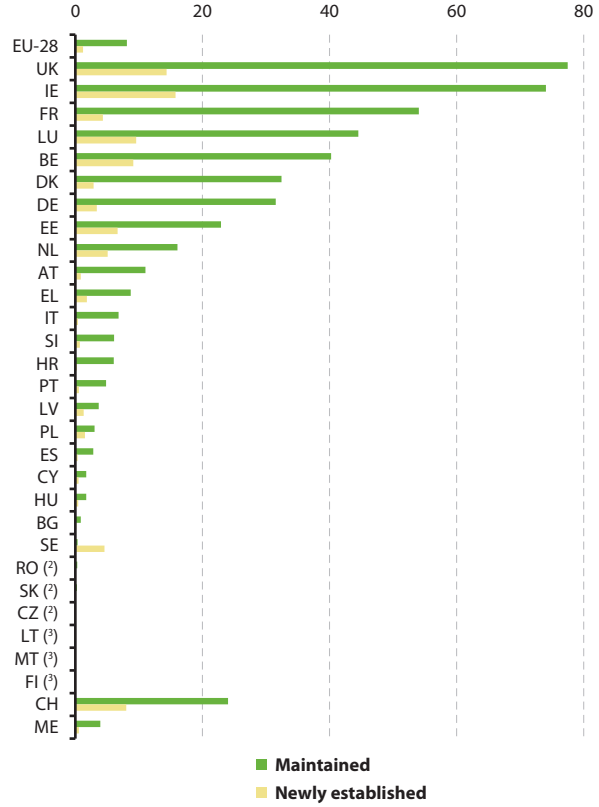
	Total holdings	Maintained			Newly established		
		Hedges	Tree lines	Stone walls	Hedges	Tree lines	Stone walls
EU-28	12 247 990	994 560	724 590	691 540	149 800	143 660	89 260
BE	42 850	17 250	15 960	-	3 910	3 820	-
BG	370 490	3 150	4 480	7 820	530	1 240	1 120
CZ	22 860	0	1 730	0	0	590	0
DK	42 100	13 650	21 070	1 740	1 200	1 440	-
DE	299 130	94 340	74 600	7 250	10 120	12 040	1 910
EE	19 610	4 490	4 240	2 610	1 300	1 220	890
IE	139 890	103 600	40 040	48 690	22 070	12 440	3 090
EL	723 010	62 820	62 710	85 660	12 920	15 930	21 350
ES	989 800	27 990	54 460	146 450	3 630	6 310	8 140
FR	516 100	279 050	139 930	46 330	22 220	14 570	3 890
HR	233 280	14 050	720	13 500	560	50	1 660
IT	1 620 880	110 210	124 850	104 580	6 120	7 930	10 120
CY	38 860	670	1 920	1 230	200	350	280
LV	83 390	3 070	3 960	-	1 100	1 300	-
LT	199 910	-	-	-	-	-	-
LU	2 200	980	-	-	210	-	-
HU	576 810	9 850	15 110	2 120	2 560	2 580	530
MT	12 530	-	2 580	9 840	-	1 040	2 570
NL	72 320	11 630	18 520	-	3 660	4 190	-
AT	150 170	16 570	19 890	3 830	1 300	2 680	1 080
PL	1 506 620	45 160	55 260	-	22 310	28 010	-
PT	305 270	14 770	13 500	147 250	1 750	1 040	9 580
RO	3 859 040	11 780	12 220	28 260	1 540	2 900	1 470
SI	74 650	4 530	710	1 830	510	370	600
SK	24 460	60	170	0	20	50	0
FI	63 870	-	-	-	-	-	-
SE	71 090	260	920	680	3 260	7 970	16 440
UK	186 800	144 630	35 040	31 870	26 800	13 600	4 540
CH	59 070	14 180	1 190	310	4 720	100	70
ME	48 870	1 920	550	950	270	2 100	730

(1) Linear elements that existed at the time of the survey and which were maintained or newly established in the three years preceding the survey.

Source: Eurostat (online data code: ef_pmlandscape)

Figure 5.13: Agricultural holdings that maintained or established new hedges, 2010 (1)

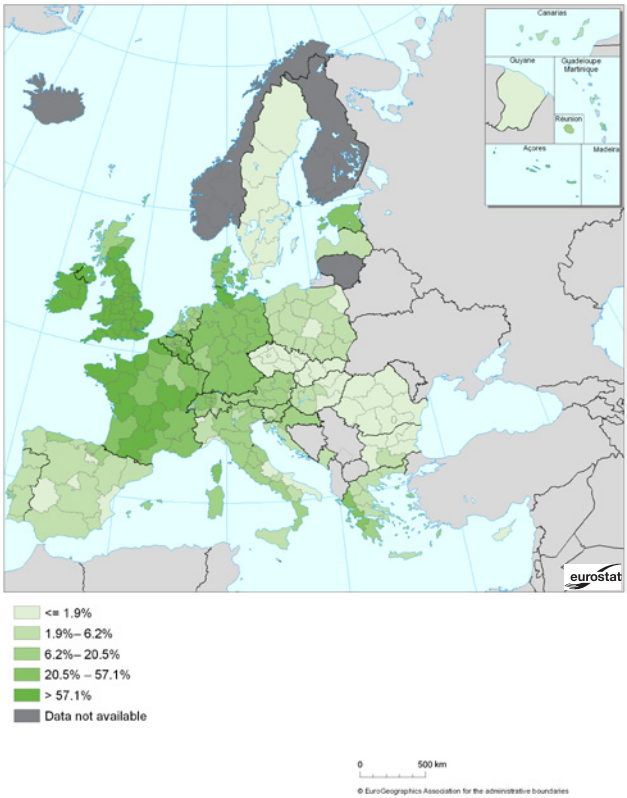
(% of all agricultural holdings)



(1) Hedges that were maintained or newly established in the three years preceding the survey.
(2) Very small shares.
(3) Non-existant or not significant.

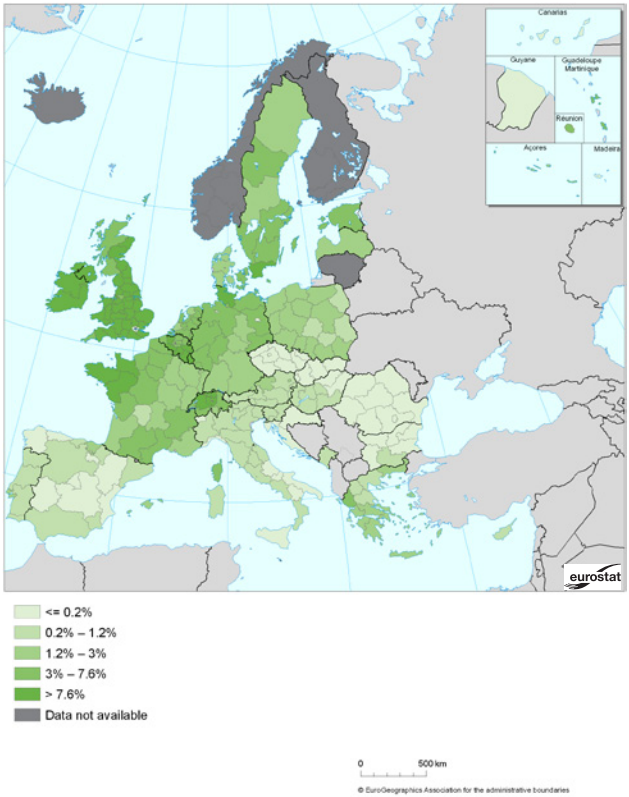
Source: Eurostat (online data code: ef_pmlandscape)

Map 5.1: Share of holdings which maintained hedges in the past three years, by NUTS 2 region, 2008–10
(% share of the total number of holdings)



Source: Eurostat (online data code: ef_pmlandscape)

Map 5.2: Share of holdings which established hedges in the past three years, by NUTS 2 region, 2008–10
(% share of the total number of holdings)

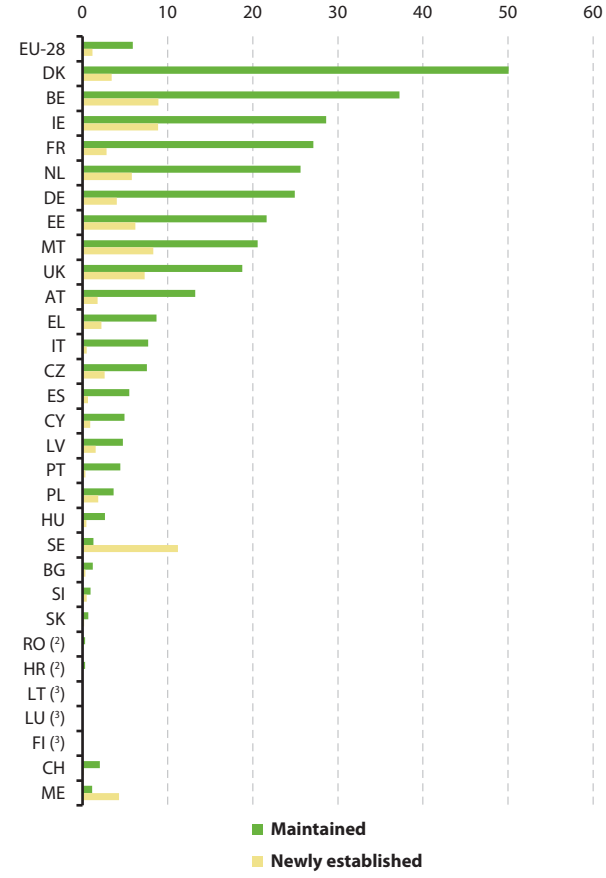


Source: Eurostat (online data code: ef_pmlandscape)

One half (50.0 %) of the agricultural holdings in Denmark maintained tree lines (such as tree avenues or alleys) in the three years prior to the 2010 survey, the highest proportion among the EU Member States and much higher than the 5.9 % average across the EU-28 as a whole (see Figure 5.14). Relatively high proportions of holdings in Belgium, Ireland, France, the Netherlands and Germany (between 25 % and 38 %) maintained tree lines. By contrast, tree lines were not a landscape feature typical of a number of Member States such as Croatia, Lithuania, Luxembourg, Romania and Finland.

Figure 5.14: Agricultural holdings that maintained or established new tree lines, 2010 (1)

(% of all agricultural holdings)

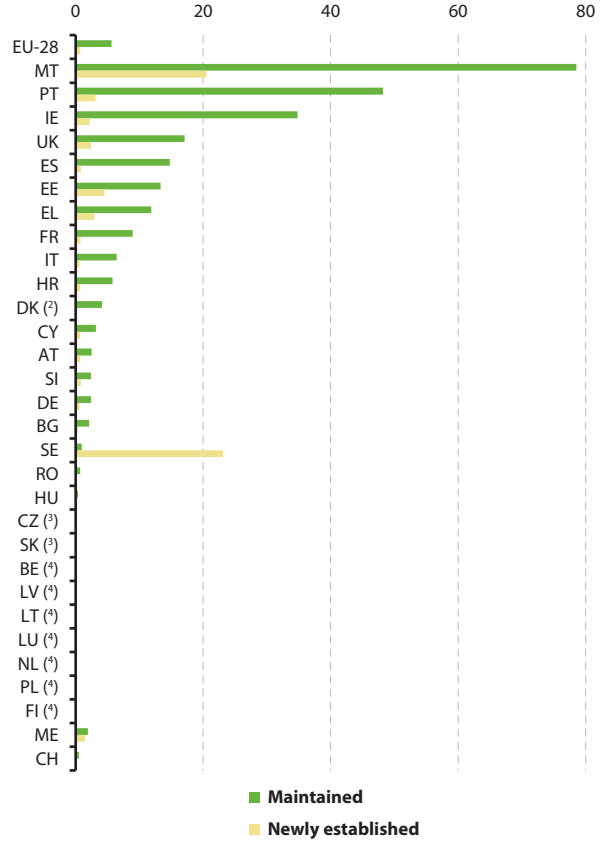


(1) Tree lines that were maintained or newly established in the three years preceding the survey.
(2) Very small shares.
(3) Non-existant or not significant.

Source: Eurostat (online data code: ef_pmlandscape)

Dry stone walls are a widespread landscape feature of Malta (nearly four in every five agricultural holdings maintained stone walls in the three years prior to the 2010 survey). These stone walls may prevent soil erosion and they were also used to parcel land being bequeathed by farmers to their children; these characteristics are also a feature of other countries too. Almost half of the holdings in Portugal maintained stone walls with about one third of holdings in Ireland doing likewise (see Figure 5.15).

Figure 5.15: Agricultural holdings that maintained or established new stone walls, 2010 (1)
(% of all agricultural holdings)



(1) Stone walls that were maintained or newly established in the three years preceding the survey.
(2) Non-existant or not significant for newly established stone walls.
(3) Very small shares.
(4) Non-existant or not significant.

Source: Eurostat (online data code: ef_pmlandscape)

The use of landscape features in Sweden appears to be on the rise: hedges were established on 4.6 % of all agricultural holdings in 2010, tree lines planted on 11.2 % of holdings and stone walls were built on 23.1 % of holdings. These developments are being supported by a specific measure financed under the rural development programme.

DATA SOURCES AND AVAILABILITY

The data on landscape features that have been used in this publication were collected for the first time in 2010 as part of the survey on agricultural production methods (SAPM). This survey was carried out together with the farm structure survey (FSS) as a census in some countries, whereas in other countries the SAPM survey was carried out as a sample survey and data were linked to data from the FSS census at the level of the individual holding to enable cross comparisons of characteristics collected in SAPM and characteristics collected in the FSS census.

The SAPM was conducted consistently throughout the EU with a common methodology providing therefore comparable and representative statistics across countries, at regional levels down to NUTS level 2 (NUTS level 1 in Germany).

Data on linear elements were collected regardless of whether the holding received payments for the maintenance or establishment of these elements. Data were collected in the form of yes/no questions; data are therefore not available on the number of linear elements or the quality of these elements. The survey requested information pertaining to existing linear elements which were maintained in the three years prior to the survey as well as newly established linear elements that were created in the three years prior to the survey.

6

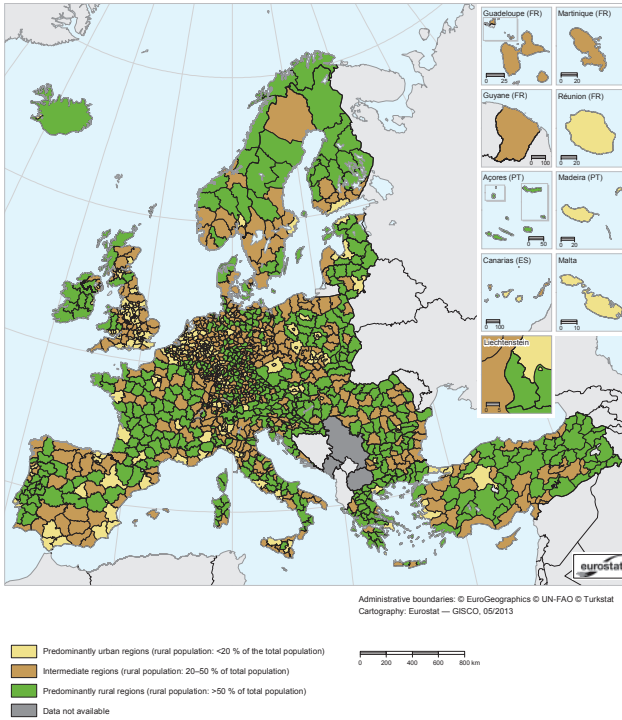
Rural development

Rural development is an important policy area, covering areas such as: farming and forestry; land use; the management of natural resources; and economic diversification in rural communities. Rural areas are important to the European economy insofar as they provide a wide range of foodstuffs and raw materials. Furthermore, rural areas are often places of natural beauty and offer a wide range of recreational activities, while forested areas provide one means of combating climate change.

Many of the European Union's (EU's) rural areas face a common challenge, as their capacity to create high-quality, sustainable jobs has fallen behind that of urban areas. Generally, incomes are lower in rural regions than in towns or cities and there are fewer job opportunities and those jobs that are available tend to be in a narrower range of economic activities. These differences between regions have, in some cases, resulted in land abandonment and considerable outward flows of rural populations. This chapter highlights the structure of rural populations, developments within rural labour markets, and an analysis of the primary economic activity in rural areas, namely, agriculture and forestry.

More than half (51.3 % in 2012) of the EU's land area is within regions classified as being predominantly rural; these areas were inhabited by 112.1 million people, more than one fifth (22.3 %) of the EU-27's population. Just under two fifths (38.7 %) of the area and more than one third (35.3 %) of the EU's population were living in intermediate regions in 2012, while predominantly urban regions made up just one tenth (10.0 %) of the land area but accounted for more than two fifths (42.4 %) of the population. Map 6.1 shows which regions fall into each of the three types of region that are identified by the urban–rural typology. It should be noted that as population levels and population density change over time regions can move from one type to another, which can also happen if regional boundaries change.

Map 6.1: Urban–rural typology, by NUTS 3 regions ([1])



([1]) Based on population grid from 2008 and NUTS 2010.

Source: Eurostat, JRC, EFGS and REGIO-GIS

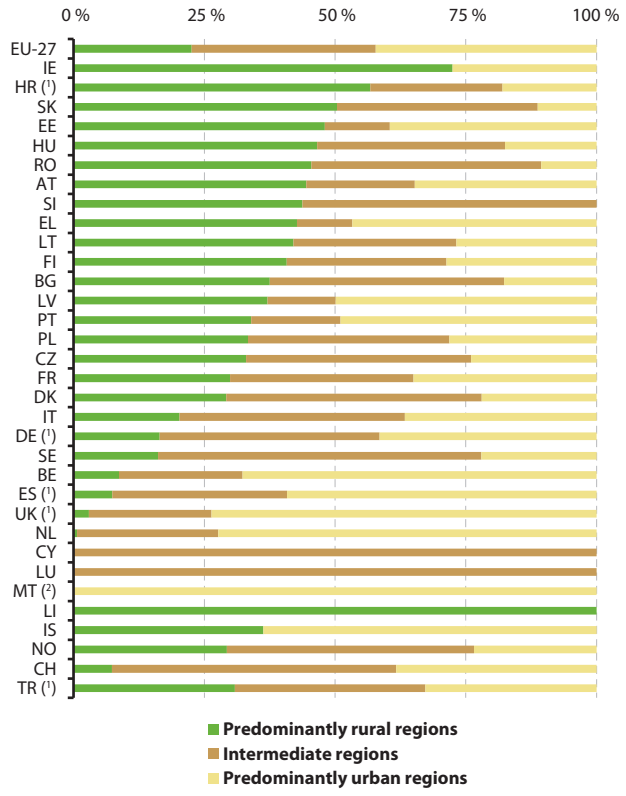
Focus on the population in predominantly rural regions

Land abandonment — the cessation of agricultural activities on a given area of land — is closely linked to population dynamics. Many rural areas in mountainous or peripheral regions of the EU have seen their local populations decline due to the outward migration of younger persons, which may be linked to a lack of economic and social opportunities. As populations age, the average age of farmers has increased, while low birth rates have resulted in relatively few young persons being born and subsequently being available to take over family farms. An analysis of population dynamics is therefore important in the context of highlighting potential socioeconomic issues that may impact upon agriculture and rural regions.

A summary of the distribution of the EU population between the three types of regions identified under the urban–rural typology as of the start of 2012 is presented in Figure 6.1 (overleaf). Although the average share of the population in predominantly rural regions was 22.3 % in the EU-27, the proportion for most of the Member States was higher; the EU-27 average was influenced by low shares in some of the largest Member States, notably the United Kingdom (2.9 % of the population living in predominantly rural regions, 1 January 2011), Spain (7.4 %, 1 January 2011), Germany (16.4 %, 1 January 2011) and Italy (20.2 %) — as well as to a lesser extent by the Netherlands (0.6 %), Belgium (8.6 %) and Sweden (16.2 %). Of the five largest (in population terms) EU Member States, France was the only one where the share of the population living in predominantly rural regions (29.9 %) was above the EU-27 average.

Figure 6.1: Population structure, by urban–rural typology, 1 January 2012

(% of total population)



(1) 1 January 2011.
(2) 1 January 2010.

Source: Eurostat (online data codes: urt_gind3 and demo_r_gind3)

Table 6.1 (overleaf) shows that France had by far the largest population in predominantly rural regions, a total of 19.5 million persons as of 1 January 2012, equivalent to 17.4 % of the EU-27 total. Germany, Poland, Italy and Romania had the next largest populations in predominantly rural regions and together with France these five Member States were home to 60.5 % of the EU-27's population found to be living in predominantly rural regions.

The highest share of the population living in predominantly rural regions as of 1 January 2012 was recorded in Ireland (72.4 %). A relatively high proportion of the population lived in predominantly rural regions in many of the central and eastern European countries that joined the EU since 2004, ranging from close to one third of the total population in the Czech Republic and Poland to more than one half in Slovakia (50.3 %) and Croatia (56.7 %); Austria, Greece, Finland and Portugal also recorded in excess of one third of their respective populations living in predominantly rural areas.

Population change

Predominantly rural regions experienced growth in 2011 in nine EU Member States (as well as in the United Kingdom in 2010); most of these were EU-15 Member States, although the population of predominantly rural regions also grew in Slovakia and Slovenia. The strongest population growth in predominantly rural regions was recorded in Belgium (7.9 per thousand) and France (5.3 per thousand). By contrast, the sharpest declines in population numbers for predominantly rural regions were recorded in Lithuania (-20.1 per thousand) and Latvia (-20.0 per thousand), followed at about half this rate by Bulgaria (-9.9 per thousand). Among the EU-15 Member States, Portugal recorded the fastest decline in its population living within predominantly rural regions, down 5.4 per thousand, ahead of Germany (2010) where the population fell by 4.5 per thousand.

Table 6.1: Population and population change in rural regions, 1 January 2012 and 2011

	Population, 1 January 2012 (2)	Crude rate of population change, 2011 (3)
	(1 000)	(per 1 000 inhabitants)
EU-27 (1)	112 061.9	:
BE	958.4	7.9
BG	2 748.4	-9.9
CZ	3 463.9	-0.2
DK	1 629.9	-1.8
DE	13 428.1	-4.5
EE	643.2	-1.5
IE	3 320.2	3.4
EL	4 821.2	-1.9
ES	3 394.1	-0.3
FR	19 524.0	5.3
HR	2 502.5	-6.1
IT	12 308.4	0.8
CY	-	-
LV	756.8	-20.0
LT	1 265.2	-20.1
LU	-	-
HU	4 637.9	-5.9
MT	-	-
NL	106.3	-2.4
AT	3 754.1	0.7
PL	12 838.0	-1.3
PT	3 581.6	-5.4
RO	9 715.2	-4.5
SI	899.4	0.6
SK	2 721.0	0.8
FI	2 200.9	1.6
SE	1 532.7	-0.6
UK	1 813.1	2.8
IS	116.0	-1.1
LI	36.5	9.0
NO	1 460.4	7.3
CH	584.5	13.4
TR	22 706.8	8.3

(1) Based on available data for Member States.
(2) Germany, Spain, the United Kingdom, Croatia and Turkey, 1 January 2011.
(3) Germany, Spain, the United Kingdom, Croatia and Turkey, 2010.
(4) Excluding rural regions in Mecklenburg-Vorpommern (DE8) and Canarias (ES7); the United Kingdom, Croatia and Turkey, 2010.

Source: Eurostat (online data codes: demo_r_gind3 and demo_r_d3avg)

Table 6.1: Population and population change in rural regions, 1 January 2012 and 2011 *(cont.)*

Crude rates of change, 2011				
Region with the highest population change (4)		**Region with the lowest population change (4)**		
(per 1 000 inhabitants)				
Fokida (EL245)	19.5	Šiaulių apskritis (LT006)	-22.7	**EU-27 (1)**
Arr. Neufchâteau (BE344)	14.5	Arr. Ieper (BE253)	3.5	**BE**
Blagoevgrad (BG413)	-5.3	Vidin (BG311)	-17.1	**BG**
Plzeňský kraj (CZ032)	0.8	Zlínský kraj (CZ072)	-1.8	**CZ**
Nordjylland (DK050)	0.3	Bornholm (DK014)	-11.8	**DK**
Landshut, Kreisfreie Stadt (DE221)	15.7	Elbe-Elster (DE407)	-15.2	**DE**
Lõuna-Eesti (EE008)	-1.0	Lääne-Eesti (EE004)	-2.2	**EE**
Midland (IE012)	12.2	Border (IE011)	-4.8	**IE**
Fokida (EL245)	19.5	Ileia (EL233)	-8.1	**EL**
Toledo (ES425)	4.6	Zamora (ES419)	-10.9	**ES**
Haute-Corse (FR832)	11.1	Aube (FR212)	-1.1	**FR**
Zadarska županija (HR033)	3.9	Ličko-senjska županija (HR032)	-14.7	**HR**
Olbia-Tempio (ITG29)	9.1	Oristano (ITG28)	-5.2	**IT**
-	:	-	:	**CY**
Vidzeme (LV008)	-18.4	Latgale (LV005)	-21.5	**LV**
Telšių apskritis (LT008)	-16.4	Šiaulių apskritis (LT006)	-22.7	**LT**
-	:	-	:	**LU**
Győr-Moson-Sopron (HU221)	4.1	Nógrád (HU313)	-14.9	**HU**
-	:	-	:	**MT**
Zeeuwsch-Vlaanderen (NL341)	-2.4	Zeeuwsch-Vlaanderen (NL341)	-2.4	**NL**
Nordburgenland (AT112)	6.9	Unterkärnten (AT213)	-5.7	**AT**
Nowosądecki (PL215)	3.7	Łomżyński (PL344)	-5.5	**PL**
Região Autónoma dos Açores (PT200)	1.4	Pinhal Interior Sul (PT166)	-13.4	**PT**
Suceava (RO215)	-1.0	Teleorman (RO317)	-11.6	**RO**
Notranjsko-kraška (SI018)	1.9	Koroška (SI013)	-1.8	**SI**
Prešovský kraj (SK041)	2.7	Banskobystrický kraj (SK032)	-1.3	**SK**
Åland (FI200)	12.3	Kainuu (FI1D4)	-9.5	**FI**
Kronobergs län (SE212)	3.9	Jämtlands län (SE322)	-3.1	**SE**
West and South of Northern Ireland (UKN05)	11.0	Powys (UKL24)	-1.8	**UK**
Landsbyggð (IS002)	-1.1	Landsbyggð (IS002)	-1.1	**IS**
Liechtenstein (LI000)	9.0	Liechtenstein (LI000)	9.0	**LI**
Aust-Agder (NO041)	13.1	Sogn og Fjordane (NO052)	4.3	**NO**
Freiburg (CH022)	21.9	Graubünden (CH056)	4.0	**CH**
Bilecik (TR413)	109.1	Tunceli (TRB14)	-79.6	**TR**

(1) Based on available data for Member States.
(2) Germany, Spain, the United Kingdom, Croatia and Turkey, 1 January 2011.
(3) Germany, Spain, the United Kingdom, Croatia and Turkey, 2010.
(4) Excluding rural regions in Mecklenburg-Vorpommern (DE8) and Canarias (ES7); the United Kingdom, Croatia and Turkey, 2010.

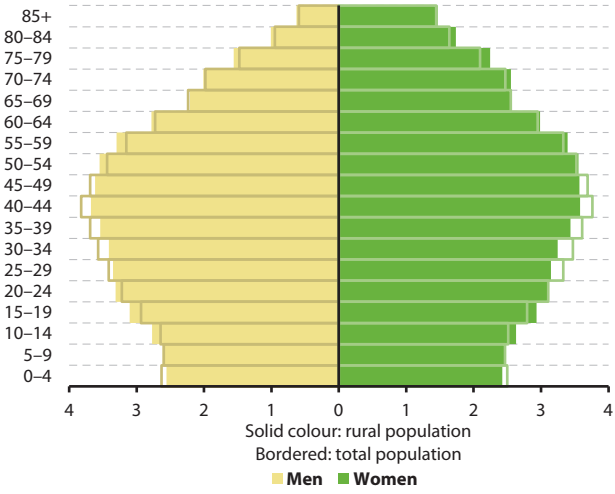
Source: Eurostat (online data codes: demo_r_gind3 and demo_r_d3avg)

The relatively sharp declines in rural populations recorded in some of the EU Member States point to issues of farmland abandonment (in some countries coming after a long process of land restitution) driven by structural and socioeconomic factors. This development is also reflected in the relatively large reductions in agricultural labour input in these countries (see the section on agricultural labour input in Chapter 3 for more details).

Population structure

It is projected that consistently low birth rates and higher life expectancy will transform the shape of the EU-27's age pyramid in the coming decades (see Figure 6.2 for the situation on 1 January 2010). Probably the most important change will be the marked transition towards a much older population structure and this development is already becoming apparent in several EU Member States. As a result, the proportion of people of working age in the EU-27 is shrinking while the relative number of those retired is expanding. The share of older persons in the total population will likely increase in the coming decades, as a greater proportion of the post-war baby-boom generation reaches retirement. This will, in turn, lead to an increased burden on those of working age to provide for the social expenditure required by the ageing population for a range of related services.

Figure 6.2: Population pyramids, EU-27, 1 January 2010 (1)
(% of total population)



(1) EU-27 aggregate based on 2010, other than: Spain and France, 1 January 2009; Ireland, 1 January 2006; excluding Greece and the United Kingdom.

Source: Eurostat (online data codes: demo_r_pjangroup and demo_pjangroup)

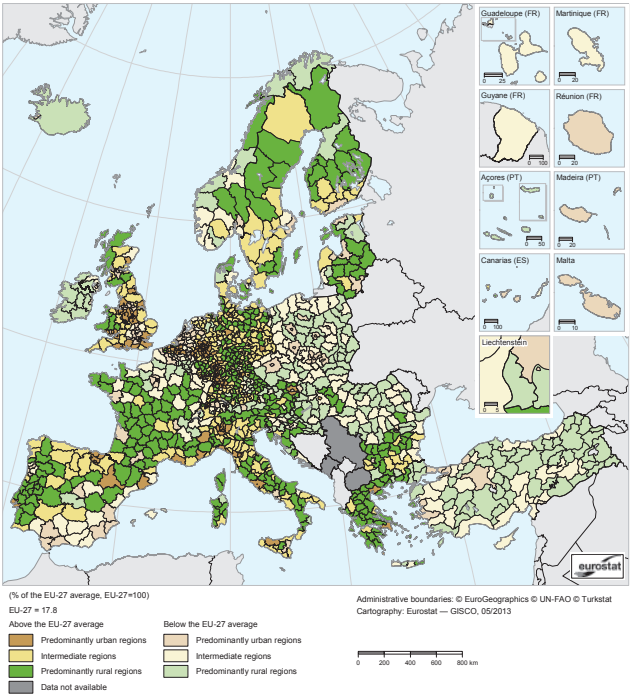
This development towards an ageing population is already apparent insofar as proportionately fewer people of working age and proportionally more people aged 65 and above are living in rural areas. In 2012, the proportion of older people aged over 65 years living in predominantly rural regions of the EU-27 was 18.6 %, compared with an average of 17.8 % across all regions.

These structural changes are important because farmland abandonment is more likely to occur when: the farming population is old (closer to retirement); there is a shrinking proportion of working age persons to take over farms, and; when real estate/land prices are weak and there is low investment in the farm. These issues were considered in the European Commission's 2013 CAP reform and have resulted in a range of initiatives being proposed to help and attract young farmers, to promote social inclusion, poverty reduction and economic development in rural areas.

Across the EU-27, the 10 regions with the highest shares of persons aged 65 or over included eight that were predominantly rural regions, one intermediate region (Dessau-Roßlau, Kreisfreie Stadt in Germany) and one predominantly urban region (Trieste in Italy) — see Map 6.2 (overleaf). The predominantly rural regions with the highest shares of persons aged 65 or over were concentrated in the centre of Portugal, with one other, northern Portuguese region (Alto Trás-os-Montes), two regions in mainland Greece (Grevena and Evrytania) and one in north western Spain (Ourense). The highest share for any region in 2012 was 33.9 % — that is one in every three people being over 65 years old — in the rural Portuguese region of Pinhal Interior Sul. By contrast, the only predominantly rural region among the 10 regions with the lowest share of persons aged 65 or more in the population was the Irish Mid-East region, with a share of 9.3 %.

Map 6.2: Share of persons aged 65+ in total population, by NUTS level 3 region and by urban–rural typology, 1 January 2012 ([1])

(% of the EU-27 average, EU-27=100)



([1]) Mecklenburg-Vorpommern (DE8), Illes Balears (ES53), Canarias (ES7), the United Kingdom, Croatia and Turkey, 1 January 2011; Malta, 1 January 2010.

Source: Eurostat (online data code: demo_r_pjanaggr3)

Table 6.2 (overleaf) shows that the share of persons aged 65 or more in the population in predominantly rural regions was above the national average in each of the EU Member States except for Belgium and Poland. The largest (in percentage point terms) differences between the shares for rural and national populations were observed for the Netherlands (5.5 percentage points), Spain (4.9), Portugal (3.8), France (3.2) and the United Kingdom (3.0).

Table 6.2 shows that Portugal had the biggest range between rural regions in relation to the share of persons aged 65 or more in the population. There was a 20.6 percentage point gap between Pinhal Interior Sul (33.9 % of the population aged 65 or more) and the Região Autónoma dos Açores (13.3 %). Differences in excess of 10 percentage points were also observed between the highest and lowest shares among rural regions in Greece, Spain, Germany, France and the United Kingdom.

Old-age dependency ratios — calculated for the purposes of this publication as the percentage ratio of persons aged 65 or more to persons aged 15–64 — for the rural regions of the EU Member States ranged from a high of 36.8 % in the rural regions of Portugal (meaning that there were a little less than three working age persons for every person aged 65 or more) to 17.8 % in Slovakia.

Table 6.2: Old-age population in rural regions, 1 January 2012

(%)

	Share of persons aged 65+ in the national population (2)	Share of persons aged 65+ in rural regions (2)	Old-age dependency ratio (65+/15–64) in rural regions (2)
EU-27 (1)	17.8	18.6	28.2
BE	17.3	16.7	25.6
BG	18.8	20.0	29.9
CZ	16.2	16.5	24.0
DK	17.3	19.0	29.9
DE	20.6	20.7	31.6
EE	17.2	17.6	26.3
IE	11.9	12.1	18.5
EL	19.7	21.8	33.9
ES	17.1	21.9	33.7
FR	17.1	20.3	32.8
HR	17.1	17.5	26.1
IT	20.6	21.6	33.0
CY	12.8	-	-
LV	18.6	19.0	28.4
LT	18.1	19.4	29.4
LU	14.0	-	-
HU	16.9	17.0	24.8
MT	16.5	-	-
NL	16.2	21.7	34.5
AT	17.8	18.1	27.0
PL	13.8	13.5	19.1
PT	19.4	23.3	36.8
RO	15.0	15.7	22.8
SI	16.8	17.3	25.0
SK	12.8	12.8	17.8
FI	18.1	19.5	30.6
SE	18.8	21.6	34.5
UK	16.6	19.7	31.2
IS	12.6	13.3	20.3
LI	14.4	14.4	20.6
NO	15.4	17.4	27.0
CH	17.2	16.2	23.9
TR	7.2	7.9	12.3

(1) Based on available data for Member States.
(2) Germany, Spain, the United Kingdom, Croatia and Turkey, 1 January 2011.
(3) Excluding rural regions in Mecklenburg-Vorpommern (DE8) and Canarias (ES7); the United Kingdom, Croatia and Turkey, 2010.

Source: Eurostat (online data code: demo_r_pjanaggr3)

Table 6.2: Old-age population in rural regions, 1 January 2012 *(cont.)*

(%)

Rural region with the highest share of persons aged 65+ (3)		Rural region with the lowest share of persons aged 65+ (3)		
Pinhal Interior Sul (PT166)	33.9	Mid-East (IE022)	9.3	**EU-27 (1)**
Arr. Ieper (BE253)	19.6	Arr. Bastogne (BE342)	14.4	**BE**
Vidin (BG311)	25.9	Blagoevgrad (BG413)	16.4	**BG**
Zlínský kraj (CZ072)	16.8	Jihočeský kraj (CZ031)	16.2	**CZ**
Bornholm (DK014)	23.8	Vestjylland (DK041)	17.7	**DK**
Suhl, Kreisfreie Stadt (DEG04)	26.6	Vechta (DE94F)	15.0	**DE**
Lääne-Eesti (EE004)	18.3	Kesk-Eesti (EE006)	17.0	**EE**
West (IE013)	13.2	Mid-East (IE022)	9.3	**IE**
Grevena (EL131)	29.3	Dodekanisos (EL421)	14.8	**EL**
Ourense (ES113)	28.4	Toledo (ES425)	16.7	**ES**
Creuse (FR632)	26.2	Ain (FR711)	15.2	**FR**
Ličko-senjska županija (HR032)	22.6	Međimurska županija (HR046)	15.3	**HR**
Alessandria (ITC18)	25.9	Crotone (ITF62)	17.3	**IT**
-	:	-	:	**CY**
Vidzeme (LV008)	19.6	Zemgale (LV009)	17.9	**LV**
Utenos apskritis (LT009)	21.4	Telšių apskritis (LT008)	17.1	**LT**
-	:	-	:	**LU**
Békés (HU332)	19.1	Szabolcs-Szatmár-Bereg (HU323)	14.0	**HU**
-	:	-	:	**MT**
Zeeuwsch-Vlaanderen (NL341)	21.7	Zeeuwsch-Vlaanderen (NL341)	21.7	**NL**
Mittelburgenland (AT111)	21.1	Tiroler Oberland (AT334)	14.6	**AT**
Łomżyński (PL344)	16.1	Pilski (PL411)	11.4	**PL**
Pinhal Interior Sul (PT166)	33.9	Região Autónoma dos Açores (PT200)	13.3	**PT**
Teleorman (RO317)	21.8	Satu Mare (RO115)	12.4	**RO**
Goriška (SI023)	18.2	Jugovzhodna Slovenija (SI017)	15.8	**SI**
Nitriansky kraj (SK023)	14.1	Prešovský kraj (SK041)	11.1	**SK**
Etelä-Savo (FI1D1)	24.2	Pohjois-Pohjanmaa (FI1D6)	15.2	**FI**
Kalmar län (SE213)	23.0	Västerbottens län (SE331)	19.5	**SE**
Powys (UKL24)	23.4	West and South of Northern Ireland (UKN05)	13.0	**UK**
Landsbyggð (IS002)	13.3	Landsbyggð (IS002)	13.3	**IS**
Liechtenstein (LI000)	14.4	Liechtenstein (LI000)	14.4	**LI**
Hedmark (NO021)	19.4	Finnmark (NO073)	15.1	**NO**
Jura (CH025)	18.5	Freiburg (CH022)	14.2	**CH**
Sinop (TR823)	15.7	Hakkari (TRB24)	2.8	**TR**

(1) Based on available data for Member States.
(2) Germany, Spain, the United Kingdom, Croatia and Turkey, 1 January 2011.
(3) Excluding rural regions in Mecklenburg-Vorpommern (DE8) and Canarias (ES7); the United Kingdom, Croatia and Turkey, 2010.

Source: Eurostat (online data code: demo_r_pjanaggr3)

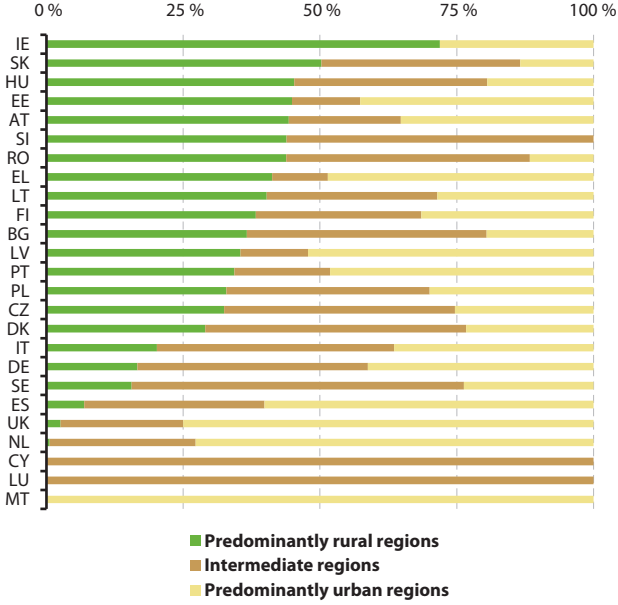
Focus on the labour market in predominantly rural regions

Economically active population

The distribution of the economically active population by type of region was very similar to the distribution of the population as a whole. As such, the weights of predominantly rural regions in the economically active population aged 25 years or over and in the total population were very close. Figure 6.3 shows the share of the active population in predominantly rural regions varied considerably from country to country: in the Netherlands, the United Kingdom and Spain predominantly rural regions accounted for less than 10 % of the economically active population, while at the other end of the scale, predominantly rural regions in Ireland accounted for over 70 % of the economically active population.

Figure 6.3: Economically active population, persons aged 25 and over, by urban–rural typology, 2011 (1)

(% of active population)



(1) Belgium, France and Croatia, not availlable; Germany, 2010.

Source: Eurostat (online data codes: urt_lfp3pop and lfst_r_lfp3pop)

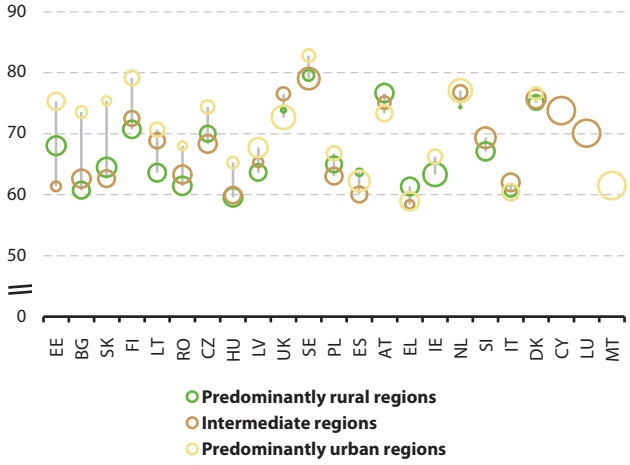
Employment and unemployment

Employment rates for persons aged 20–64 in the three different types of regions identified by the urban–rural typology are presented in Figure 6.4. In half of the EU Member States for which data are available for 2011 and which have at least two types of regions, predominantly rural regions generally had a lower employment rate than the other types of regions. In seven EU Member States intermediate regions had the lowest employment rates, while in Greece, Spain and Austria predominantly rural regions had a higher employment rate than for either intermediate or predominantly urban regions.

In several central and eastern EU Member States the difference between the employment rate in predominantly rural regions and predominantly urban regions was particularly high, notably in Bulgaria (12.8 percentage points difference), as well as Slovakia (10.9), Finland (8.4), Estonia (7.3), Lithuania (7.1), Hungary (5.7) and Romania (6.6). In most of the remaining Member States the differences between the employment rates for predominantly rural regions and those for intermediate regions were less pronounced, while employment rates were very homogenous for all types of regions in Denmark, Spain, Italy and Poland.

Figure 6.4: Employment rate, persons aged 20–64, by urban–rural typology, 2011 (1)

(%)



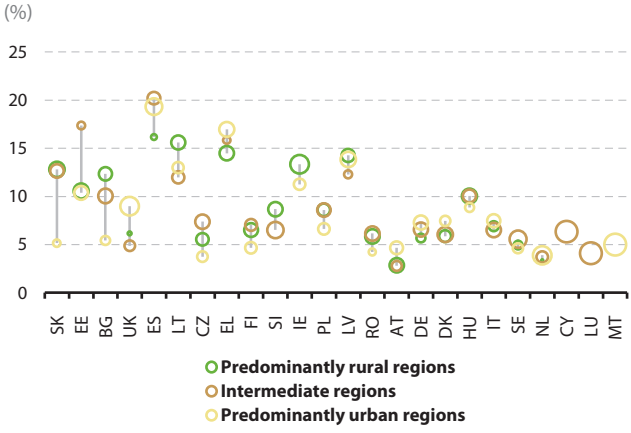
(1) Belgium, Germany, France, Croatia and Portugal, not available; Czech Republic, 2010; the size of the bubble reflects the share in total population of each type of region.

Source: Eurostat (online data codes: urt_lfe3emprt and urt_pjanaggr3)

Figure 6.5 presents unemployment rates in the three different types of regions in 2011 (German data are for 2010). The highest unemployment rate for predominantly rural regions was recorded in Spain, at 16.2 %, while double-digit rural unemployment rates were also observed in Bulgaria, Estonia, Ireland, Greece, Latvia, Lithuania, Hungary and Slovakia.

In Denmark, Germany, Greece, Spain and the Netherlands, rural unemployment rates were lower than in the other two types of region. Only Ireland and some central and eastern EU Member States recorded higher unemployment rates in predominantly rural regions than in the other types of regions. By contrast, predominantly urban regions observed the highest unemployment rates in some western and southern Member States. The highest differences between unemployment rates in the different types of regions were recorded in Bulgaria, Estonia and Slovakia.

Figure 6.5: Unemployment rate, persons aged 25 or more, by urban–rural typology, 2011 (1)



(1) Belgium, France, Croatia and Portugal, not available; Germany, 2010; the size of the bubble reflects the share in total population of each type of region.

Source: Eurostat (online data codes: urt_lfu3rt, urt_pjanaggr3, lfst_r_lfu3pers and lfst_r_lfp3pop)

Focus on the economy in predominantly rural regions

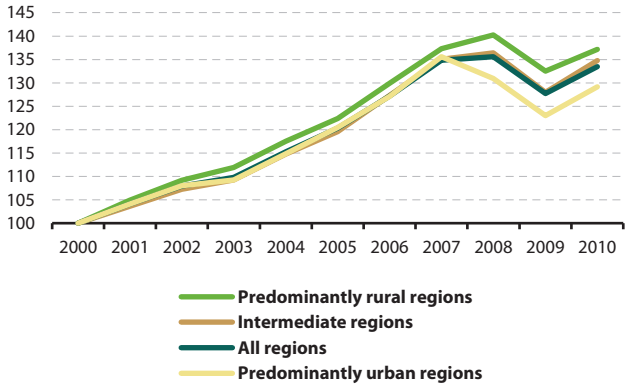
In 2010, predominantly urban regions accounted for approximately 54.3 % of GDP within the EU-27, while intermediate regions contributed around 29.2 % and predominantly rural regions the remaining 15.3 %. Compared with 10 years earlier this gap between predominantly rural regions and predominantly urban regions closed slightly, as the share accounted for by predominantly urban regions fell 1.2 percentage points while the shares of the two other types of regions increased by 0.6 percentage points each.

Figure 6.6 (overleaf) shows how GDP in the three types of regions developed between 2000 and 2010; note that this data is presented in current prices and so is not adjusted for the impact of inflation. As noted above, measured in absolute terms the urban–rural gap in GDP remained significant, but narrowed slightly during the last decade. Between 2000 and 2007, GDP growth in predominantly rural regions slightly outpaced that in the two other types of region. A major change in developments occurred in 2008 as the impact of the financial and economic crisis was particularly strongly felt in predominantly urban regions where GDP fell on average by 3.4 %; in 2008 intermediate regions (1.0 %) and predominantly rural regions (2.2 %) continued to experience growth. In 2009, the downturn intensified with all three types of region experiencing a reduction in output, although the contraction was slightly deeper for intermediate regions (-6.2 %) and predominantly urban regions (-6.1 %) than it was for predominantly rural regions (-5.5 %). In 2010, all types of regions returned to growth, albeit less than the falls experienced in 2009, ranging from 3.5 % growth for predominantly rural regions to 5.0 % growth for predominantly urban regions and 5.3 % growth for intermediate regions.

Over the period 2000–10, average economic growth in the EU-27 for predominantly rural regions was 3.2 % per year, ahead of intermediate regions (3.0 %) and predominantly urban regions (2.6 %). It can therefore be concluded that the development of GDP in predominantly rural regions was stronger than for either of the other types of regions and that it was somewhat less volatile during the financial and economic crisis.

Figure 6.6: Gross domestic product (GDP), by urban-rural typology, EU-27, 2000–10 (1)

(2000=100)



(1) The analysis according to the urban–rural typology excludes: Brandenburg (DE4), Städteregion Aachen (DEA2D), Bautzen (DED2C), Görlitz (DED2D), Meißen DED2E), Sächsische Schweiz-Osterzgebirge (DED2F), Chemnitz (DED4), Leipzig (DED5), Piemonte (ITC1), Liguria (ITC3), Lombardia (ITC4), Sud (ITF), Isole (ITG), Veneto (ITH3), Friuli-Venezia Giulia (ITH4), Emilia-Romagna (ITH5), Centro (ITI), Agglomeratie Leiden en Bollenstreek (NL337), Oost-Zuid-Holland (NL338), Groot-Rijnmond (NL339) and Zuidoost-Zuid-Holland (NL33A).

Source: Eurostat (online data code: urt_e3gdp)

Focus on agriculture in rural regions

The importance attached to the structure and composition of rural economies reflects their diversity and is a consequence of the scale of diversification from and within primary activities such as agriculture, forestry and fisheries. Employment challenges across the EU's rural areas are related, at least in part, to the diversity of local economies.

Services have been the major driver of growth within the EU during recent decades. However, their share of regional GDP (note that data are not available for the vast majority of Italian regions) was much lower in 2010 in predominantly rural regions (64.7 %) than in intermediate regions (68.7 %) or predominantly urban regions (78.6 %). By contrast, the shares of other economic activities were higher within predominantly rural regions — 23.8 % for industry, 7.1 % for construction and 4.4 % for agriculture, forestry and fisheries — than for the two other types of regions. Services contributed more than half of total value added in predominantly rural regions in all of the Member States in 2010, except for the Netherlands and Romania, both of which had relatively large industrial sectors, while Romania's agriculture, forestry and fisheries sector was one of the largest (in terms of its contribution to total value added) — see Table 6.3 (overleaf). In four Member States, the share of services in total value added was over 70.0 % in predominantly rural regions, reaching 73.1 % in Denmark.

While agriculture, forestry and fisheries was the smallest of the four economic activities presented in Table 6.3 for predominantly rural regions across the EU, this situation was not repeated in all of the Member States. In the predominantly rural regions of Bulgaria, Estonia, Ireland, Greece, Latvia, Lithuania, Poland and Romania, the contribution of agriculture, forestry and fisheries to total value added in 2010 was greater than that of construction; this was also the case in Croatia. The highest contributions of agriculture, forestry and fisheries to value added in predominantly rural regions were recorded in Bulgaria (11.2 %), Latvia and Romania (both 11.0 %). By contrast, agriculture, forestry and fisheries contributed as little as 2.4 % of total value added in the predominantly rural regions of Germany and Ireland.

Table 6.3: Gross value added in rural regions, 2010
(% share of total value added)

	Agriculture, forestry and fisheries	Industry	Construction	Services
EU-27 (1)	4.4	23.8	7.1	64.7
BE	3.2	16.7	8.2	71.9
BG	11.2	31.1	5.7	52.0
CZ	2.8	36.3	8.1	52.8
DK	3.2	17.6	6.2	73.1
DE	2.4	28.6	6.6	62.4
EE	8.2	24.3	7.3	60.2
IE	2.4	32.6	2.3	62.6
EL	7.4	17.4	4.6	70.6
ES	7.1	16.6	14.0	62.2
FR	4.2	16.5	7.3	72.0
HR	9.1	23.8	7.7	59.4
IT	:	:	:	:
CY	-	-	-	-
LV	11.0	23.6	5.5	59.8
LT	7.1	28.6	7.0	57.3
LU	-	-	-	-
HU	6.5	34.4	4.9	54.2
MT	-	-	-	-
NL	3.1	46.2	5.5	45.2
AT	3.3	27.1	8.7	60.9
PL	8.5	26.9	8.3	56.3
PT	5.6	21.1	6.5	66.8
RO	11.0	34.1	8.3	46.5
SI	4.1	29.3	7.2	59.4
SK	4.7	31.3	9.5	54.5
FI	5.6	24.2	7.4	62.8
SE	4.5	26.9	5.3	63.3
UK	3.1	18.5	8.9	69.5
NO	4.0	16.6	7.2	54.6

(1) Excluding Italy.

Source: Eurostat (online data code: nama_r_e3vab95r2)

Table 6.3: Gross value added in rural regions, 2010 *(cont.)*

(% share of total value added)

Rural region with the highest share of value added in agriculture, forestry and fisheries	Rural region with the highest share of value added in services	
Silistra (BG325)	Evrytania (EL243)	**EU-27 (1)**
Arr. Diksmuide (BE252)	Arr. Philippeville (BE353)	BE
Silistra (BG325)	Vidin (BG311)	BG
Kraj Vysočina (CZ063)	Olomoucký kraj (CZ071)	CZ
Vestjylland (DK041)	Bornholm (DK014)	DK
Rügen (DE80H)	Suhl, Kreisfreie Stadt (DEG04)	DE
Kesk-Eesti (EE006)	Lõuna-Eesti (EE008)	EE
South-East (IE024)	Midland (IE012)	IE
Pella (EL124)	Evrytania (EL243)	EL
Cuenca (ES423)	La Gomera (ES706)	ES
Lozère (FR814)	Corse-du-Sud (FR831)	FR
Virovitičko-podravska županija (HR048)	Zadarska županija (HR033)	HR
:	:	IT
-	-	CY
Zemgale (LV009)	Latgale (LV005)	LV
Marijampolės apskritis (LT004)	Tauragės apskritis (LT007)	LT
-	-	LU
Békés (HU332)	Somogy (HU232)	HU
-	-	MT
Zeeuwsch-Vlaanderen (NL341)	Zeeuwsch-Vlaanderen (NL341)	NL
Weinviertel (AT125)	Tiroler Oberland (AT334)	AT
Ostrołęcko-siedlecki (PL122)	Przemyski (PL324)	PL
Baixo Alentejo (PT184)	Região Autónoma dos Açores (PT200)	PT
Ialomița (RO315)	Călărași (RO312)	RO
Notranjsko-kraška (SI018)	Podravska (SI012)	SI
Banskobystrický kraj (SK032)	Banskobystrický kraj (SK032)	SK
Etelä-Savo (FI1D1)	Åland (FI200)	FI
Jämtlands län (SE322)	Gotlands län (SE214)	SE
Herefordshire, County of (UKG11)	Eilean Siar (Western Isles) (UKM64)	UK
Finnmark (NO073)	Troms (NO072)	NO

(1) Excluding Italy.

Source: Eurostat (online data code: nama_r_e3vab95r2)

Agricultural, forestry and fisheries labour force

In 2010, the regular agricultural labour force in the EU-27 was around 25.0 million people, very many of them working on a part-time and/or seasonal basis. The agricultural labour input in the EU-27 in 2012 was estimated at 10.1 million annual working units: one annual working unit is equivalent to one person working full-time for a whole year. The level of labour input in 2012 was around 25 % lower than it had been 10 years earlier, an average reduction of 2.9 % per annum. The largest overall reductions in agricultural employment over this 10-year period were in Slovakia (-58.9 %) and Estonia (-56.2 %), while agricultural labour input also fell by

Table 6.4: Employment in rural regions, 2009
(% share of total employment)

	Agriculture, forestry and fisheries	Industry	Construction	Services (1)
EU-27	:	:	:	:
BE	4.7	13.4	8.5	73.5
BG	30.7	23.6	5.3	40.5
CZ	5.5	31.6	8.9	53.9
DK	4.6	16.8	8.1	70.5
DE	:	:	:	:
EE	7.6	22.9	10.1	59.3
IE	7.2	15.4	9.5	67.8
EL	22.8	10.7	8.0	58.6
ES	8.6	12.1	11.1	68.2
FR	5.2	16.8	7.7	70.3
HR	7.9	25.6	9.8	56.8
IT	:	:	:	:
CY	-	-	-	-
LV	15.3	15.5	8.0	61.3
LT	15.8	18.9	9.0	56.3
LU	-	-	-	-
HU	11.2	29.3	7.2	52.3
MT	-	-	-	-
NL	4.1	21.1	6.7	68.1
AT	11.7	20.1	8.2	59.9
PL	27.0	21.1	7.4	44.5
PT	23.4	14.4	9.9	52.3
RO	39.0	22.0	6.3	32.7
SI	12.5	28.0	9.1	50.5
SK	4.8	25.5	9.5	60.2
FI	8.5	18.8	7.5	65.2
SE	3.3	14.9	7.1	74.7
UK (2)	6.9	11.6	9.2	72.4
LI	0.9	33.7	7.6	57.8

(1) Estonia (some regions), Spain, France, Malta and Austria: calculated as the difference between the sum of the other three categories and 100 %.
(2) Excluding West and South of Northern Ireland.

Source: Eurostat (online data code: nama_r_e3emp95r2)

30.0 % or more in Bulgaria, Latvia, Romania, the Czech Republic, Hungary, Sweden, Greece and Denmark, as well as in Norway. The only EU Member States that reported an increase in their agricultural labour input over this period were Malta (14.0 %) and Ireland (4.6 %).

Table 6.4 presents a similar analysis to that in Table 6.3 but focused on employment; it should be noted that this analysis is for 2009 and that data are not available for either Germany or Italy (and hence no EU aggregate has been produced). Again services dominated the analysis, providing employment for more than half the workforce in predominantly rural regions in all Member

Table 6.4: Employment in rural regions, 2009 *(cont.)*

(% share of total employment)

Rural region with the highest share of employment in agriculture, forestry and fisheries	Rural region with the highest share of employment in services	
Ialomiţa (RO315)	El Hierro (ES703)	**EU-27**
Arr. Diksmuide (BE252)	Arr. Arlon (BE341)	BE
Silistra (BG325)	Vidin (BG311)	BG
Kraj Vysočina (CZ063)	Olomoucký kraj (CZ071)	CZ
Bornholm (DK014)	Bornholm (DK014)	DK
:	:	DE
Kesk-Eesti (EE006)	Lõuna-Eesti (EE008)	EE
South-East (IE024)	South-West (IE025)	IE
Rodopi (EL113)	Dodekanisos (EL421)	EL
Lugo (ES112)	El Hierro (ES703)	ES
Gers (FR624)	Hautes-Alpes (FR822)	FR
Virovitičko-podravska županija (HR048)	Dubrovačko-neretvanska županija (HR037)	HR
:	:	IT
-	-	CY
Vidzeme (LV008)	Latgale (LV005)	LV
Tauragės apskritis (LT007)	Panevėžio apskritis (LT005)	LT
-	-	LU
Békés (HU332)	Szabolcs-Szatmár-Bereg (HU323)	HU
-	-	MT
Zeeuwsch-Vlaanderen (NL341)	Zeeuwsch-Vlaanderen (NL341)	NL
Oststeiermark (AT224)	Sankt Pölten (AT123)	AT
Łomżyński (PL344)	Stargardzki (PL423)	PL
Alto Trás-os-Montes (PT118)	Região Autónoma dos Açores (PT200)	PT
Ialomiţa (RO315)	Mureş (RO125)	RO
Pomurska (SI011)	Podravska (SI012)	SI
Nitriansky kraj (SK023)	Banskobystrický kraj (SK032)	SK
Etelä-Pohjanmaa (FI194)	Åland (FI200)	FI
Kronobergs län (SE212)	Jämtlands län (SE322)	SE
Orkney Islands (UKM65)	Eilean Siar (Western Isles) (UKM64)	UK (2)
Liechtenstein (LI000)	Liechtenstein (LI000)	LI

(1) Estonia (some regions), Spain, France, Malta and Austria: calculated as the difference between the sum of the other three categories and 100 %.
(2) Excluding West and South of Northern Ireland.

Source: Eurostat (online data code: nama_r_e3emp95r2)

States except for Poland, Bulgaria and Romania. The employment share of agriculture, forestry and fisheries in predominantly rural regions tended to be higher than the equivalent value added share, although this was not the case in Estonia or Sweden. In some of the Member States the difference between the value added and employment contributions were particularly large, notably in Romania, Bulgaria, Poland, Portugal and Greece, where the difference was more than 10 percentage points; the employment shares of agriculture, forestry and fisheries in the predominantly rural regions of these Member States were so high that they were greater than the shares recorded for either industry or construction, and in the case of Romania the employment share of agriculture, forestry and fisheries in predominantly rural regions was also higher than that recorded for services.

By contrast, agriculture, forestry and fisheries provided less than 5.0 % of employment in the predominantly rural regions of Sweden, the Netherlands, Denmark, Belgium and Slovakia. Agriculture, forestry and fisheries contributed 4.4 % to the rural economy's total value added in 2010 (excluding nearly all Italian regions) and 15.6 % of rural employment in 2009 (excluding Germany and nearly all Italian regions). Looking from another perspective, predominantly rural regions accounted for 42.4 % of the added value in agriculture, forestry and fisheries across the EU and for 54.9 % of employment in this sector; this underlines not only the importance of the agriculture, forestry and fisheries sector for predominantly rural regions but also the importance of predominantly rural regions for the agriculture, forestry and fisheries sector.

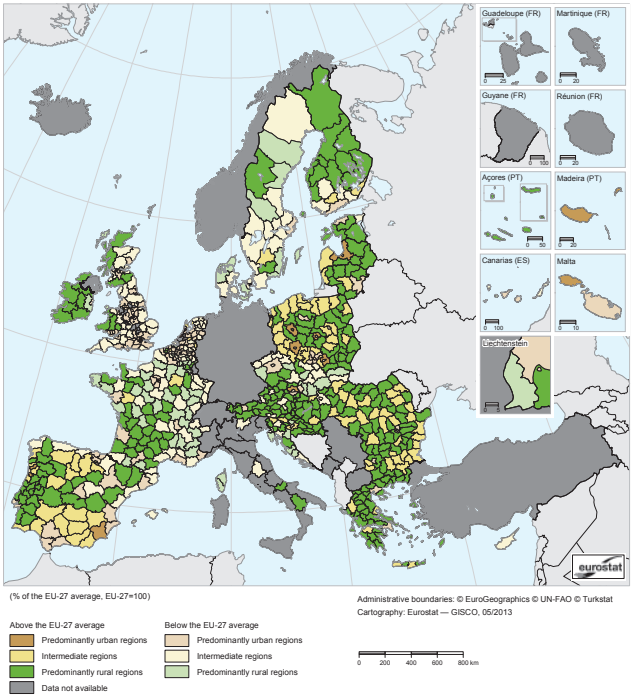
Map 6.3 presents more detailed information on the relative importance of agriculture, forestry and fisheries in regional employment. For the EU-27 as a whole, agriculture, forestry and fisheries provided 5.21 % of employment in 2012, down from 5.37 % in 2009 (the year for which regional data are presented in the map). Unsurprisingly, employment in this sector is particularly concentrated in predominantly rural regions. Among the 750 regions in the map some 325 were predominantly rural regions, and among these 264 had a higher employment share for agriculture, forestry and fisheries than the EU-27 average. By contrast, there were only 12 (out of 188) predominantly urban regions and 95 (out of 237) intermediate regions with an above average employment share in agriculture, forestry and fisheries.

The highest shares of agriculture, forestry and fisheries in total employment at the NUTS level 3 were mainly in Romania:

Ialomita had the highest share (63.6 %) while seven other Romanian regions had shares over 50.0 %. Following on from these regions were Silistra in Bulgaria (49.4 %) and Alto Trás-os-Montes in Portugal (47.8 %), before four more Romanian regions. The highest shares of agriculture, forestry and fisheries in employment among intermediate regions were 45.0 % and 44.0 % in the Romanian regions of Bacau and Iasi, the 17th and 19th highest shares respectively. Among predominantly urban regions the highest share was 26.2 % in the Polish region of Krakowski, which was the 74th highest share. The lowest share of agriculture, forestry and fisheries among predominantly rural regions was 0.5 % in the Spanish island region of El Hierro. In 12 regions there was no employment in agriculture, forestry and

Map 6.3: Share of agriculture, forestry and fisheries in total employment, by NUTS 3 regions and by urban–rural typology, 2009 (1)

(% of the EU-27 average, EU-27=100)



(1) Départements d'outre-mer (FR9) and Northern Ireland (UKN), by NUTS 1 regions; Italy, by NUTS 2 regions.

Source: Eurostat (online data code: nama_r_e3emp95r2)

fisheries, 10 of which were predominantly urban regions and two were intermediate regions (Swindon and Plymouth in the United Kingdom); nine of these regions with no employment in agriculture, forestry and fisheries were in the United Kingdom and the other was the Danish capital city region of Byen København.

Agricultural secondary activities

Whilst the share of agriculture, forestry and fisheries in rural economies has declined, the importance of diversification in rural economies has grown. In the EU-27 as a whole around 5.2 % of farms had at least one other source of income (referred to as other gainful activities) — see Table 6.5. This share ranged from less than 5.0 % in Italy, Poland, Malta, Spain, Greece, Bulgaria, Romania, Cyprus and Lithuania (where it was just 0.8 %) to more than one third in Sweden, Austria and Denmark (where it reached 52.0 %), while among those Member States that joined the EU in 2004 or 2007 the highest proportions of agricultural holdings with other gainful activities were recorded in Slovenia (16.8 %), the Czech Republic (15.0 %) and Estonia (13.5 %). The overall EU-27 average is strongly influenced by the low proportion of agricultural holdings in Italy, Poland and Romania that had other gainful activities, while each of these three Member States had a very high overall number of holdings — together they accounted for well over half (58.2 %) of the 12.0 million holdings across the EU-27; note that many of these were very small in size and employed the equivalent of less than a single, full-time person.

When considered in terms of their economic weight (based on standard output), agricultural holdings that undertake secondary activities were more important than suggested by a simple count, as they generated 18.9 % of agricultural standard output in the EU-27 in 2010. In some Member States, the relative importance of secondary activities was quite different whether measured in terms of the number of holdings or their output, for example: while only 1.1 % of holdings in Bulgaria and Romania had a secondary activity, those that did accounted for 13.5 % and 9.6 % respectively of total standard output, while in Lithuania those agricultural holdings with secondary activities (0.8 % of the total) generated 7.4 % of standard output.

Table 6.5 gives an indication of the various types of secondary gainful activities that were practised by agricultural holdings in 2010. Note that the shares indicated in the table do not show the relative importance of the secondary activity, but the overall importance of the holdings that undertake that activity among all holdings with secondary activities. For example, agricultural

holdings that also offered tourism services accounted for 12.5 % of the standard output of holdings with any secondary activity in the EU-27. As holdings may undertake multiple secondary activities the shares for individual activities cannot be aggregated. Particularly common secondary activities included contractual work, forestry, the processing of farm products and renewable energy production.

Table 6.5: Other gainful activities for agricultural holdings, 2010

	Holdings with other gainful activities (% of total number of holdings)	Tourism	Processing farm products	Renewable energy production	Forestry work	Wood processing	Aquaculture	Contractual work	Handicrafts	Others
		(standard output of holdings having the specified activity as a share of the standard output for all holdings with other gainful activities) (%) (1)								
EU-27	5.2	12.5	18.7	18.7	:	2.0	1.0	39.1	0.9	23.6
BE	7.8	14.5	18.1	18.5	4.2	1.9	1.0	36.7	4.8	23.3
BG	1.1	0.8	13.4	0.0	1.7	0.1	2.5	76.8	0.1	17.7
CZ	15.0	11.5	20.1	10.4	2.5	5.5	1.4	77.6	6.5	1.9
DK	52.0	2.9	2.6	10.7	67.8	0.0	0.0	38.8	3.0	16.2
DE	30.8	6.6	16.5	49.4	18.2	3.6	0.5	36.0	0.2	13.3
EE	13.5	5.7	17.0	0.5	19.5	2.9	0.7	51.4	0.9	23.5
IE	9.2	10.0	2.6	2.2	34.3	1.5	0.8	27.7	0.9	28.1
EL	1.4	3.9	46.4	0.9	1.8	1.4	0.6	49.2	0.6	2.6
ES	2.1	15.6	23.6	11.3	7.9	0.7	0.3	25.6	1.2	21.8
FR	9.4	18.0	31.3	3.7	1.1	1.2	0.5	42.0	0.6	10.3
HR	5.9	16.0	47.1	0.0	0.0	11.6	1.3	40.0	1.7	4.6
IT	4.7	23.5	26.0	11.5	4.6	1.9	0.2	25.9	0.3	34.7
CY	1.0	0.0	88.4	0.0	0.0	0.0	0.0	11.5	0.0	0.0
LV	5.0	7.3	39.4	1.7	24.4	4.1	21.5	26.5	0.9	17.4
LT	0.8	3.4	43.4	0.2	2.8	1.9	0.2	14.3	2.8	36.1
LU	24.1	18.0	12.1	31.4	11.5	7.4	0.0	60.0	0.0	18.9
HU	8.2	6.7	32.2	1.2	10.1	0.6	1.7	73.8	0.1	48.5
MT	2.2	0.0	56.8	0.0	0.0	0.0	0.0	43.7	0.0	0.0
NL	24.6	9.8	7.4	20.4	0.0	0.0	0.2	22.3	0.0	60.6
AT	37.3	13.8	21.8	15.6	63.9	1.2	0.5	18.5	0.6	3.1
PL	3.3	8.8	13.7	1.1	1.9	1.3	12.3	18.9	0.5	54.3
PT	5.0	14.2	17.7	0.0	50.6	1.7	0.0	21.5	0.3	14.2
RO	1.1	1.0	67.6	0.3	0.5	0.7	0.2	21.7	0.1	19.8
SI	16.8	5.2	22.5	1.3	67.0	2.9	0.1	11.7	0.9	4.9
SK	5.9	7.0	27.5	0.2	0.8	2.2	1.2	63.2	8.2	50.1
FI	26.5	9.7	6.9	5.9	6.4	2.5	0.3	58.6	1.0	34.7
SE	33.8	14.4	10.3	9.3	:	2.4	0.6	71.3	1.3	13.6
UK	17.5	26.7	7.6	3.0	8.5	2.5	1.7	55.4	0.6	24.4
NO	54.7	7.8	4.4	2.4	50.4	22.3	:	55.1	1.2	10.2
CH	44.5	10.1	19.7	10.1	38.2	13.5	0.1	38.6	2.5	50.3

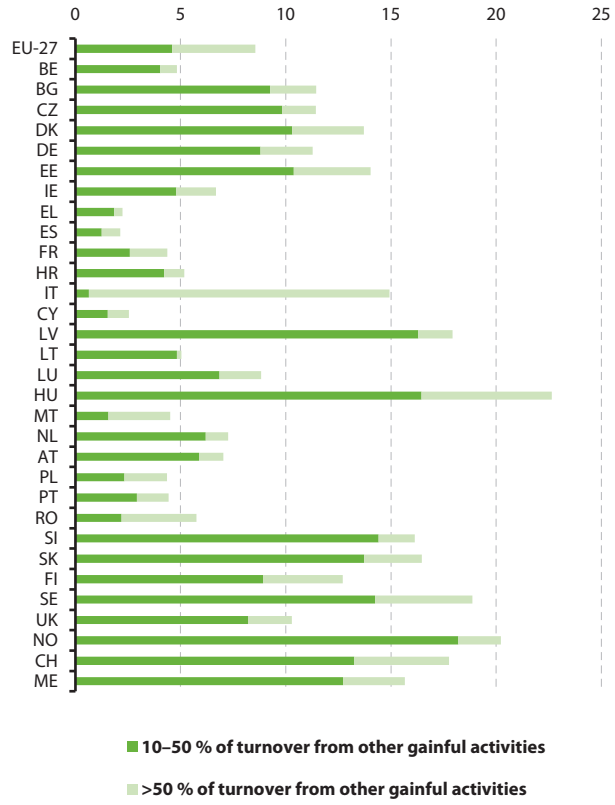
(1) Reading note: agricultural holdings that also offered tourism services as another gainful activity accounted for 12.5 % of the standard output of all holdings with any secondary activity in the EU-27. As holdings may undertake multiple secondary activities, the shares for individual activities cannot be aggregated.

Source: Eurostat (online data code: ef_ogadsexage)

As noted above, 18.9 % of all standard output in the EU-27 was generated by agricultural holdings with secondary activities. Figure 6.7 gives further analysis of this figure, and shows that a total of 8.6 % of all standard output was generated by holdings where secondary activities generated at least 10 % of turnover, among which 4.0 % of all standard output was generated by holdings where secondary activities generated more than half of turnover. Hungary had the highest proportion of standard output generated by holdings where at least 10 % of turnover was from secondary activities, while Italy had by far the highest proportion of standard output generated by holdings where secondary activities generated more than half of turnover.

Figure 6.7: Standard output of agricultural holdings from other gainful activities, 2010

(% of standard output for all agricultural holdings)



Source: Eurostat (online data code: ef_ogadsexage)

DATA SOURCES AND AVAILABILITY

Eurostat's regional statistics are the basis for the information presented in this chapter. For most regional analyses, data are collected at a specific regional level (of the NUTS classification). By contrast, the statistics presented here have been produced by first classifying the full set of NUTS level 3 regions according to the extent that they are urban or rural: this classification is known as the urban–rural typology.

The latest classification exercise was carried out in 2012 and featured three important changes compared with the previous exercise (conducted in 2010):

- the introduction of the NUTS 2010 classification;
- the availability of a more accurate population grid;
- a re-evaluation of the presence of major cities, using a harmonised list of cities from the Urban Audit.

The typology uses a three-step approach to determine urban or rural areas for NUTS level 3 regions, namely: identify rural populations at the level of the 1 km^2 grid cells; classify NUTS level 3 regions according to the share of population for each type of grid cell; and then adjust the classification based on the presence of cities.

For grid cells to be considered as urban they should fulfil two conditions: a population density of at least 300 inhabitants per km^2 and a minimum population of 5 000 inhabitants in contiguous (neighbouring or adjoining) cells above the density threshold; all remaining cells are considered as rural. Having established which grid cells fall into which category, the next step is to classify the NUTS level 3 regions into one of three groups:

- predominantly rural regions: where the rural population accounts for 50 % or more of the total population;
- intermediate regions: where the rural population accounts for between 20 % and 50 % of the total population;
- predominantly urban regions: where the rural population accounts for less than 20 % of the total population.

Those NUTS 3 regions which are smaller than 500 km^2 are combined, for classification purposes, with one or more of their neighbours. The results are then checked against a final criterion: namely, the size of any cities within each particular region. A region classified as predominantly rural becomes intermediate if it contains a city of more than 200 000 inhabitants which represents at least 25 % of the region's total population. A region classified as intermediate becomes predominantly urban if it contains a city of more than 500 000 inhabitants representing at least 25 % of the regional population total.

7

Forestry

The European Union (EU) accounts for approximately 5 % of the world's forests and contrary to what is happening in many other parts of the world, the forested area of the EU is slowly increasing. Ecologically, the forests of the EU belong to many different bio-geographical regions and have adapted to a variety of natural conditions, ranging from bogs to steppes and from lowland to alpine forests. Socioeconomically, they vary from small family holdings to state forests or to large estates owned by companies

Forests are affected by a broad array of EU policies and initiatives. For several decades, environmental forest functions have attracted increasing attention — for example, in relation to the protection of biodiversity and, more recently, in the context of climate change impacts and energy policies. Apart from the traditional production of wood and other forest-based products, forests are increasingly valued for their environmental role and as a public amenity. The EU promotes sustainable forest management with the following objectives, to:

- create and preserve jobs and otherwise contribute to rural livelihoods;
- protect the environment by preserving the soil, minimising erosion, purifying water, protecting aquifers, improving air quality, absorbing carbon, mitigating climate change, and preserving biodiversity;
- monitor the state of forests to meet environmental agreements;
- improve the competitiveness of forest-based industries in the internal market;
- promote the use of wood and other forest products as environmentally friendly products;
- reduce poverty in developing countries by furthering forest law enforcement, fair trade conditions and halting deforestation and illegal logging.

The European Commission presented an EU forest action plan (COM(2006) 302 final) in 2006 which underpins support for sustainable forest management and the multi-functional role of forests. The plan is a framework for forest-related measures and is used to coordinate EU initiatives with the forest policies of the Member States. In March 2010, the European Commission adopted a Green paper 'on forest protection and information in the EU: preparing forests for climate change' (COM(2010) 66 final). The paper aimed to stimulate debate concerning the way climate change modifies the terms of forest management and protection, and how EU policy should develop as a consequence.

Forestry, along with farming, remains crucial for land use and the management of natural resources in the EU's rural areas, and as a basis for economic diversification in rural communities. Rural development policy is part of the EU's Common Agricultural Policy (CAP) which has been the main instrument for implementing forestry measures in recent years. In this context, it is estimated that spending on forest-related measures — through the European Agricultural Fund for Rural Development — amounted to EUR 9–10 billion during the period 2007–13.

Forests and other wooded land

The EU-28 has approximately 180 million hectares of forests and other wooded land, corresponding to 42.4 % of its land area (see Table 7.1). As such, forests and other wooded land cover a slightly higher proportion of land area than that which is used for agriculture (some 40 %). Across the EU Member States, there were six countries that reported that in excess of half of their land area was covered by forests and other wooded land in 2010. Just over three quarters (77 %) of the land area was covered by forests and other wooded land in Finland and Sweden, while the proportion stood at 63 % for Slovenia; the remaining three countries, each with shares in the range of 54–56 %, were Estonia, Spain and Latvia.

Table 7.1: Forest area and ownership, 2010

	Land area without inland water (1)	Forest and other wooded land	Forest	Forest ownership	
				Public	Private (2)
	(1 000 hectares)			(%)	
EU-28	*424 578*	*180 232*	*158 785*	*40.3*	*59.7*
BE	3 033	706	678	44.3	55.7
BG	10 893	3 927	3 927	86.8	13.2
CZ	7 723	2 657	2 657	76.8	23.2
DK	*4 243*	591	544	23.7	76.3
DE	*34 877*	11 076	11 076	51.5	48.5
EE	4 343	2 350	2 217	39.0	61.0
IE	6 839	789	739	54.3	45.7
EL	13 082	6 539	3 903	77.5	22.5
ES	50 176	27 748	18 173	29.4	70.6
FR	*55 010*	17 572	15 954	25.8	74.2
HR	5 659	2 474	1 920	72.7	27.3
IT	29 511	10 916	9 149	33.6	66.4
CY	921	387	173	68.7	31.3
LV	6 220	3 467	3 354	49.4	50.6
LT	6 268	2 240	2 160	63.5	36.5
LU	259	88	87	47.1	52.9
HU	*8 961*	2 029	2 029	57.8	42.2
MT	32	0	0	-	-
NL	3 372	365	365	50.4	49.6
AT	8 241	4 006	3 887	25.7	74.3
PL	*30 633*	9 337	9 337	82.2	17.8
PT	*9 068*	3 611	3 456	1.6	98.4
RO	23 016	6 733	6 573	67.7	32.3
SI	2 014	1 274	1 253	23.2	76.8
SK	*4 810*	1 933	1 933	50.6	49.4
FI	30 389	23 269	22 157	30.3	69.7
SE	40 734	31 247	28 203	26.8	73.2
UK	24 251	2 901	2 881	33.3	66.7
IS	10 024	116	30	27.8	72.2
LI	16	7	7	91.4	8.6
NO	30 425	12 384	10 250	14.1	85.9
CH	4 000	1 311	1 240	71.7	28.3
ME	*1 345*	744	467	72.2	27.8
MK	2 491	1 141	998	90.4	9.6
RS	*8 746*	3 123	2 713	50.6	49.4
TR	76 960	20 864	10 175	99.9	0.1

(1) Latest available year; France: only covers the mainland.
(2) Includes any other form of ownership.

Source: Eurostat (online data code: demo_r_d3area); Food and Agriculture Organization of the United Nations — Global Forest Resources Assessment, 2010; Ministerial Conference for the Protection of Forests in Europe (Forest Europe) — State of Europe's Forests, 2011

Table 7.2: Basic forest resources

	Forest and other wooded land	Forest available for wood supply		Roundwood production		
	Growing stock		Net annual increment	Total	Fuelwood	Industrial roundwood
	2010	2010		2012 (1)		
	(1 000 m³ over bark)			(1 000 m³ under bark)		
EU-28	*24 484 127*	*22 084 665*	*775 750*	*433 653*	*93 224*	*340 429*
BE	167 900	164 288	5 289	5 128	893	4 235
BG	656 000	435 000	14 677	6 205	2 841	3 364
CZ	769 300	737 650	23 086	15 381	1 914	13 467
DK	109 500	111 862	5 796	2 583	1 115	1 468
DE	3 492 000	3 466 179	107 000	52 338	9 476	42 863
EE	455 200	398 300	11 201	7 290	1 926	5 364
IE	74 300	74 300	3 588	2 580	205	2 376
EL	185 000	170 385	4 511	1 196	:	:
ES	913 900	783 900	45 842	16 934	3 900	13 034
FR	2 584 000	2 453 193	94 367	56 097	26 291	29 806
HR	415 590	334 400	7 423	5 714	1 557	4 157
IT	1 448 300	1 285 330	32 543	7 744	5 388	2 356
CY	8 829	3 269	38	11	7	4
LV	634 900	584 000	18 333	11 508	1 308	10 201
LT	472 200	408 022	10 750	6 921	2 200	4 721
LU	25 950	25 756	650	261	18	244
HU	359 387	259 154	11 099	6 056	2 995	3 061
MT	80	0	0	0	0	0
NL	70 000	56 000	2 250	955	290	665
AT	1 135 000	1 106 722	25 136	18 021	5 189	12 831
PL	2 049 000	2 092 000	68 519	37 203	5 110	32 093
PT	187 800	154 000	19 087	:	:	:
RO	1 390 200	1 098 328	33 984	16 943	4 430	12 513
SI	417 000	389 927	9 165	3 341	1 121	2 220
SK	514 100	477 600	13 193	8 202	587	7 615
FI	2 199 391	2 024 000	91 038	49 967	5 353	44 614
SE	3 369 300	2 651 100	96 486	68 900	5 900	63 000
UK	380 000	340 000	20 700	10 112	1 332	8 780
IS	1 192	0	0	0	0	0
LI	1 750	1 399	-	23	16	7
NO	997 000	797 000	21 878	10 653	1 785	8 868
CH	429 000	415 000	6 232	4 447	1 499	2 948
ME	74	68	-	908	707	201
MK	76 410	52 150	830	597	476	121
RS	415 000	-	5 232	7 478	6 232	1 246
TR	1 400 437	1 212 164	36 609	21 959	4 258	17 701

(1) EU-28, Belgium, Bulgaria, the Czech Republic, Denmark, Greece and Luxembourg: 2011.

Source: Eurostat (online data code: for_removv); Food and Agriculture Organization of the United Nations — Global Forest Resources Assessment, 2010; Ministerial Conference for the Protection of Forests in Europe (Forest Europe) — State of Europe's Forests, 2011

Sweden recorded the largest area covered by forest and other wooded land in 2010 (31.2 million hectares), followed by Spain (27.7 million hectares), Finland (23.3 million hectares), France (17.6 million hectares), Germany (11.1 million hectares) and Italy (10.9 million hectares). In relative terms, Sweden accounted for 17.3 % of the total area in the EU-28 that was covered by forest and other wooded land in 2010; Spain (15.4 %) and Finland (12.9 %) were the only other Member States to record double-digit shares.

Just under 60 % of the EU-28's forests were privately owned in 2010. There were 11 Member States where the share of privately owned forest was above the EU-28 average, peaking at 98.4 % in Portugal. By contrast, the share of privately owned forest was below 20 % in Poland and Bulgaria (where the lowest proportion was recorded, at 13.2 %).

The growing stock of forest and other wooded land in the EU-28 totalled some 24.4 billion cubic metres (over bark) in 2010: Germany had the highest share (14.3 %), followed by Sweden (13.8 %) and France (10.6 %). Germany also had the largest growing stock in forests available for wood supply in 2010, some 3.5 billion m^3, while Finland, Poland, France and Sweden each reported between 2.0 and 2.6 billion m^3. The net annual increment in forests available for wood supply was also highest in Germany, rising by 107 million m^3 in 2010 (13.8 % of the total increase for the EU-28), while Sweden, France and Finland each accounted for around 12 % of the annual increment across the EU.

Primary and secondary wood products

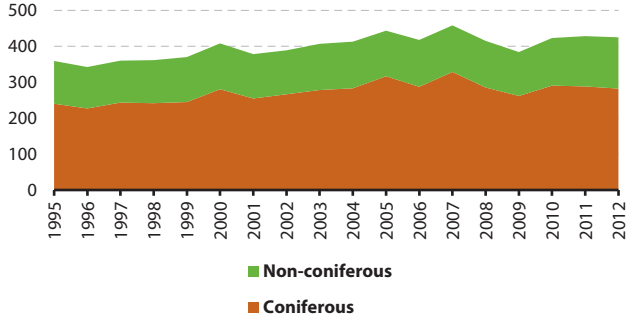
Among the EU Member States, Sweden produced the most roundwood (68.9 million m^3) in 2012, followed by Germany, France and Finland (each producing between 50 million and 56 million m^3) — see Table 7.2 . Slightly more than one fifth of the EU-28's roundwood production in 2011 was used as wood for fuel, while the remainder was industrial roundwood used either for sawnwood and veneers, or for pulp and paper production.

There were four EU Member States where more than 90 % of total roundwood production was used as industrial roundwood in 2012 — Sweden, Ireland, Slovakia and Luxembourg (where the highest share was recorded, although information for the latter is only available for 2011, 93.3 %). Italy and Cyprus were the only Member States where more than half of the total roundwood produced in 2012 was destined for fuelwood.

The overall level of EU-27 roundwood production reached an estimated 425.0 million m^3 in 2012, some 33.3 million m^3 (or 7.3 %) lower than the peak level of output recorded in 2007. Note that some of the peaks (most recently 2000, 2005 and 2007) in roundwood production are due to forestry and logging having to cope with unplanned numbers of trees that were felled by severe storms.

From 1995 to 2007, there was generally a relatively steady increase in the level of roundwood production for the EU-27 (see Figure 7.1.) While the level of output for non-coniferous (broadleaved or hardwood) species remained relatively stable, there were considerably larger differences (from one year to the next) when analysing developments for coniferous (softwood) species. The effects of the financial and economic crisis led to the level of EU-27 coniferous production falling in 2008 and this pattern was confirmed with a further reduction in 2009, when non-coniferous production also fell. Roundwood production in the EU-27 rebounded strongly in 2010 (up 10.2 %) and continued to rise in 2011, but at a much more modest pace (1.2 %), although there was a slight contraction in output in 2012 (-0.8 %).

Figure 7.1: Annual production of roundwood, EU-27, 1995–2012 ([1]) (million m^3)



([1]) 2000–01 and 2007–11: estimates; 2012: provisional.
Source: Eurostat (online data code: for_remov)

Table 7.3: Roundwood production, 2000–11

(1 000 m^3)

	2000	2005	2009	2010	2011	2012
EU-28 (1)	*411 764*	*447 502*	*388 311*	*427 611*	*433 653*	*425 039*
BE	*4 510*	4 950	4 395	4 827	5 128	:
BG	4 784	5 862	4 599	5 668	6 205	:
CZ	14 441	15 510	15 502	16 736	15 381	:
DK	2 952	2 962	2 813	2 669	2 583	:
DE	53 710	56 946	48 073	54 418	56 142	52 338
EE	8 910	5 500	*5 400*	7 200	7 110	7 290
IE	2 673	2 648	2 429	2 618	2 635	2 580
EL	2 245	1 523	1 034	1 048	1 196	:
ES	14 321	15 531	13 980	16 089	15 428	16 934
FR	65 865	52 499	54 447	55 808	*55 041*	*56 097*
HR	3 669	4 018	4 242	4 477	5 258	:
IT	9 329	8 691	8 080	7 844	7 744	*7 744*
CY	21	10	10	9	8	11
LV	14 304	12 843	10 442	12 534	12 833	11 508
LT	5 500	6 045	5 460	7 097	7 004	6 921
LU	*260*	249	274	275	261	:
HU	5 902	5 940	5 244	5 740	6 232	6 056
MT	0	0	0	0	0	0
NL	1 039	1 110	1 016	1 081	978	955
AT	13 276	16 471	16 727	17 831	18 696	18 021
PL	26 025	31 945	34 629	35 467	37 180	37 203
PT	10 831	10 746	9 564	9 648	10 961	:
RO	13 148	14 501	12 557	13 112	14 359	*16 943*
SI	2 253	2 733	2 930	2 945	3 388	3 341
SK	6 163	9 302	9 087	9 599	9 213	8 202
FI	54 542	52 250	41 653	50 952	50 767	49 967
SE	63 300	98 200	65 100	72 200	71 900	68 900
UK	7 791	8 519	8 624	9 718	10 020	10 112
IS	0	0	0	0	0	0
LI	:	:	25	25	26	23
NO	8 156	9 667	8 884	10 443	10 291	*10 653*
CH	9 238	5 285	4 702	4 938	4 861	4 447
ME	:	:	364	364	364	:
MK	:	822	639	631	631	:
TR	15 939	16 185	19 430	20 554	21 039	:

(1) EU-27: 2012.

Source: Eurostat (online data code: for_removv)

Table 7.4 presents information on sawnwood production: the total volume of output across the EU-27 was an estimated 98.6 million m³ in 2012. Germany and Sweden were the leading sawnwood producers among the EU Member States, accounting for 21.3 % and 16.1 % of the EU-27 total in 2012.

EU-27 sawnwood production peaked at 115.5 million m³ in 2007. There followed a period of contraction during the financial and economic crisis, which resulted in output falling by 21.2 % between 2007 and 2009. Sawnwood production rebounded at a rapid pace in 2010 and continued to rise in 2011 (thereby following the

Table 7.4: Sawnwood production, 2000–11
(1 000 m³)

	2000	2005	2009	2010	2011	2012
EU-27	*100 064*	*108 082*	*91 044*	*100 138*	*101 240*	*98 696*
BE	*1 150*	1 285	:	:	:	:
BG	:	:	450	554	728	:
CZ	:	4 003	4 048	4 744	4 454	:
DK	364	*196*	441	:	372	:
DE	16 340	21 931	20 781	22 059	22 628	21 031
EE	:	2 063	1 127	1 771	1 503	1 500
IE	888	1 015	774	772	761	782
EL	:	:	106	118	:	:
ES	3 760	3 660	2 072	2 038	2 162	2 162
FR	10 536	9 715	7 885	8 316	*8 675*	*8 242*
HR	:	:	:	:	:	:
IT	1 630	1 590	1 220	1 200	1 250	1 370
CY	:	4	5	4	3	3
LV	:	4 227	2 520	3 150	3 432	3 316
LT	:	1 445	1 011	1 272	1 260	1 150
LU	*133*	*133*	129	:	78	:
HU	:	215	102	:	:	:
MT	:	0	0	0	0	0
NL	389	279	210	231	238	190
AT	10 390	11 074	8 458	9 603	9 636	8 952
PL	:	3 360	3 850	4 220	4 422	4 570
PT	1 427	1 010	1 093	:	1 044	:
RO	:	:	3 598	4 323	4 442	5 148
SI	:	527	525	760	703	660
SK	:	2 621	2 254	2 576	2 204	1 560
FI	13 420	12 269	8 072	9 473	9 750	9 350
SE	16 176	17 600	16 200	16 750	16 500	*15 900*
UK	2 622	2 780	2 856	:	3 279	3 404
IS	0	0	:	:	:	:
LI	:	:	4	4	8	:
NO	:	2 326	1 850	:	2 271	:
CH	1 625	1 591	1 481	1 457	1 313	1 104

Source: Eurostat (online data code: for_swpan)

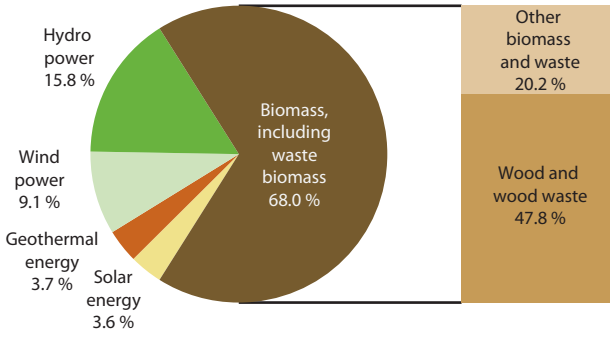
same development as that witnessed for industrial roundwood), posting an overall increase in output of 11.2 % between 2009 and 2011. This was followed by a reduction in the level of sawnwood production, down by 2.5 % in the EU-27 in 2012.

Wood as a source of energy

Energy supply has always been one of the main uses for wood. Policy interest in energy security and renewable sources of energy, combined with relatively high oil and gas prices, has led in recent years to a reassessment of the possible use of wood as a source of energy. The use of renewables is enshrined in legally binding targets that have been set for each EU Member State concerning the role to be played by renewable energy sources through to 2020. The 'Renewable energy progress report' (COM(2013) 175 final) provides information on the progress being made towards the target of achieving a 20 % share of renewable energy in final energy consumption by 2020. This goal is designed to help reduce emissions, improve the security of energy supply and reduce energy import dependence.

Among the renewable energy sources, biomass plays an important role: accounting for just over two thirds (68.0 %) of the gross inland energy consumption of renewables within the EU-28 in 2011, as shown in Figure 7.2. Within this biomass total, wood and wood waste provided the highest share of energy from organic, non-fossil materials of biological origin, accounting for almost half (47.8 %) of the EU-28's gross inland energy consumption of renewables in 2011.

Figure 7.2: Consumption of renewable energy, EU-28, 2011 (%)

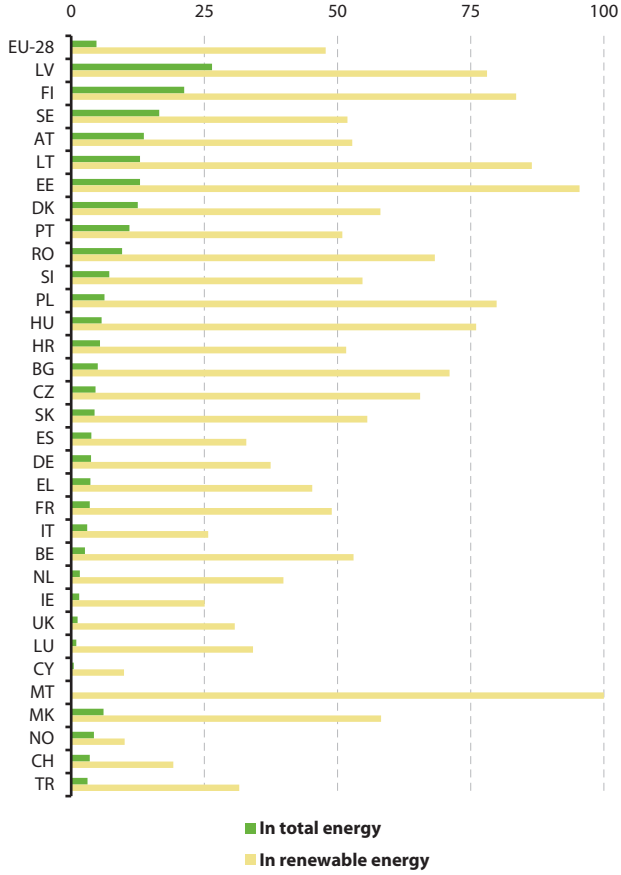


Source: Eurostat (online data codes: nrg_1071a and nrg_1072a)

Wood energy is, in many European countries, the most important single source of energy from renewables. Wood and wood waste accounted for 4.8 % of the total energy consumed within the EU-28 in 2011 (see Figure 7.3). The share of wood and wood waste in total gross inland energy consumption ranged from over 20 % in Latvia and Finland, down to less than 1 % in Luxembourg, Cyprus and Malta.

Figure 7.3: Wood as a source of energy, 2011

(% share of wood and wood waste in gross inland energy consumption)



Source: Eurostat (online data codes: nrg_100a and nrg_1071a)

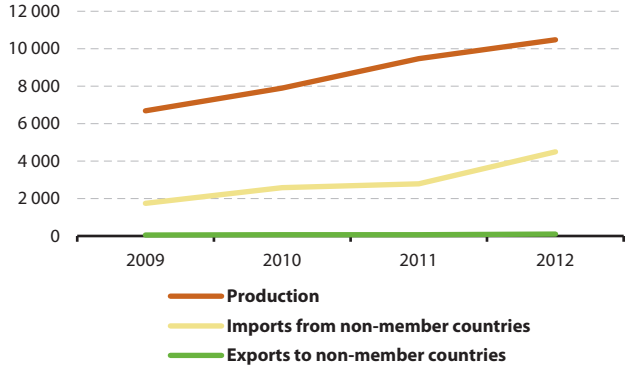
Wood was the source of energy for more than three quarters of the renewable energy consumed in Hungary, Poland, Finland, the Baltic Member States and Malta. By contrast, the relative weight of wood in the mix of renewables was relatively low in Spain, the United Kingdom, Italy, Ireland and Cyprus (where the lowest share was reported, 9.9 %); this was also the case in oil- and gas-rich Norway (10.0 %).

Wood pellets are made from dried sawdust, shavings or wood powder, with the raw material being subjected to high pressure to increase the density of the final product. Pellets are currently the most economical way of converting biomass into fuel and are a fast-growing source of energy in Europe. They can be used for power production, or, more efficiently, directly for combustion in residential and commercial heating.

The EU-27 is the largest global producer of wood pellets, its output reaching an estimated 10.5 million tonnes in 2012; production in the EU-27 rose by 56.9 % overall between 2009 and 2012. The EU-27 is also a net importer of wood pellets: the level of imports from non-member countries rose to 4.5 million tonnes by 2012, which was an overall increase of 157.8 % in relation to 2009.

Figure 7.4: Development of production and trade in wood pellets, EU-27, 2009–12 (1)

(1 000 tonnes)



(1) Estimates.

Source: Eurostat (online data code: for_basic)

Although potential biomass supplies within most EU Member States are substantial, some countries import significant volumes of fuel pellets and other forms of biomass as they seek to meet their renewable energy targets, raising concerns about the impact of importing wood as a source of energy and the consequences this may have on the global sustainability of forests and resulting levels of carbon emissions.

Germany produced an estimated 2.2 million tonnes of wood pellets in 2012, which equated to more than one fifth (21.5 %) of the EU-27's output. The information available for the EU Member States for 2012 is incomplete — however, Sweden was the second largest producer in 2010, with 1.4 million tonnes of wood pellets (17.5 % of the EU-27 total).

Denmark had the highest level of wood pellet imports in 2012 among the EU-27 Member States, some 2.0 million tonnes; note this figure relates to total imports, in other words those from non-member countries as well as other Member States. The Netherlands, the United Kingdom and Italy each imported in excess of one million tonnes of wood pellets in 2012. By contrast, Germany was the only EU Member State to export more than one million tonnes of wood pellets in the same year (see Table 7.5).

Table 7.5: Production and trade in wood pellets, 2010 and 2012
(1 000 tonnes)

	Production		Imports (1)		Exports (1)	
	2010	2012	2010	2012	2010	2012
EU-27	*7 898*	*10 467*	2 576	*4 482*	*70*	*90*
BE	0	0	315	*972*	38	*38*
BG	*7*	:	1	*22*	8	*38*
CZ	*85*	:	15	*25*	99	*140*
DK	0	0	1 443	*2 034*	35	*55*
DE	1 744	*2 246*	270	521	740	1 323
EE	423	:	50	15	421	430
IE	28	0	*12*	0	0	0
EL	0	0	0	*18*	0	*0*
ES	184	250	13	16	5	35
FR	*449*	*550*	144	*26*	231	*101*
HR	:	:	:	:	:	:
IT	539	750	816	1 197	2	5
CY	0	0	0	0	0	0
LV	615	*1 048*	9	*34*	589	*904*
LT	205	250	44	40	213	268
LU	*8*	:	4	*2*	11	*5*
HU	0	24	43	10	12	21
MT	0	0	0	0	0	0
NL	120	100	1 024	1 648	135	260
AT	686	893	231	*256*	397	*477*
PL	429	*680*	34	*190*	69	82
PT	*486*	690	64	24	550	560
RO	175	340	3	*1*	165	*276*
SI	65	83	45	51	42	43
SK	87	90	4	7	38	15
FI	177	252	11	28	109	61
SE	*1 386*	:	697	488	117	195
UK	0	279	551	1 487	60	54
LI	0	:	*0*	:	*0*	:
NO (2)	45	*52*	*14*	20	*1*	*10*
CH	0	180	:	36	:	7

(1) Extra-EU trade for the EU-27 aggregate.
(2) 2011 instead of 2012.

Source: Eurostat (online data code: for_basic)

Forestry and logging: economic indicators and employment

A range of economic indicators are presented for forestry and logging activities across the Member States in Table 7.6. The data confirms, to a large degree, the information presented at the start of this chapter, insofar as the largest forestry and logging activities — on the basis of gross value added generated in 2010 — were found in Sweden, Finland and Germany.

Gross fixed capital formation measures the proportion of gross value added that is (re-)invested, rather than being consumed, as such it may be considered an important indicator for the competitiveness of an industry. On the basis of the information that is available for 16 of the EU Member States, EUR 2.1 billion was invested in forestry and logging in 2010, accounting for a 13.9% share of gross value added. More than half of the investment that took place in 2010 could be attributed to Sweden and Finland. The highest relative shares of gross fixed capital formation in value added for 2010 were recorded in Cyprus (70.7 %) and Greece (37.6 %) — although these figures tended to reflect low levels of added value, rather than high levels of investment. They were followed by Sweden (21.7 %), while Finland, Austria and the Czech Republic each recorded shares of gross fixed capital formation in gross value added in the range of 15–16 %.

Table 7.6: Economic indicators for forestry and logging

	Gross output		Gross value added		Gross fixed capital formation		Gross value added/ forest area available for wood supply	
	2005	2010	2005	2010	2005	2010	2005	2010
	(EUR million)						(EUR/hectare)	
BE	:	:	:	:	:	:	:	:
BG	266	525	84	205	11	15	33	71
CZ	1 424	2 081	496	660	63	101	197	283
DK	:	:	:	:	:	:	:	:
DE	4 141	*5 722*	1 738	*2 250*	168	*172*	164	*213*
EE	:	:	:	:	:	:	:	:
IE	:	:	:	:	:	:	:	:
EL	71	76	54	55	4	21	16	15
ES	1 582	:	787	:	:	:	55	:
FR	5 531	5 325	2 968	2 162	472	183	201	143
HR	:	:	:	:	:	:	:	:
IT	456	:	365	:	83	:	47	:
CY	2	3	2	2	2	1	38	47
LV	:	1 229	:	568	:	0	:	181
LT	172	:	102	:	10	:	55	:
LU	:	:	:	:	:	:	:	:
HU (1)	339	344	132	163	24	24	79	95
MT	:	0	:	0	:	0	:	-
NL	133	:	46	:	10	:	156	:
AT	1 786	2 233	872	1 076	155	169	261	322
PL	*1 991*	:	1 110	:	137	:	132	:
PT	895	*932*	666	*674*	98	*86*	370	*370*
RO	531	898	314	446	:	43	62	86
SI	182	287	113	184	:	:	97	157
SK	624	664	259	226	33	32	148	128
FI	3 235	4 035	2 422	2 764	388	430	121	139
SE	:	8 378	:	3 726	:	808	:	181
UK	741	849	295	373	18	43	124	155
NO	:	*1 186*	:	*573*	:	*75*	:	*89*
CH	505	*706*	187	*281*	83	*102*	159	*234*

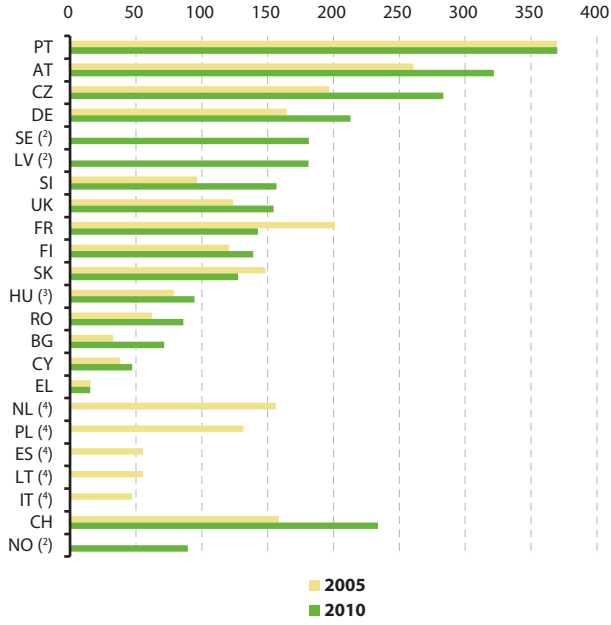
(1) Gross output, gross value added and gross fixed capital formation: 2009 instead of 2010.

Source: Eurostat (online data codes: for_ieeaf_cp and for_area)

The ratio of value added generated within the forestry and logging sector compared with the forest area available for wood supply is one indicator that can be used to analyse the productivity of forestry activities across the EU (see Figure 7.5). The indicator shows that the highest shares of value added per forest area in the EU were in Portugal, Austria, the Czech Republic, Germany, Sweden and Latvia; forests accounted for at least one third of the total land area in each of these Member States.

Figure 7.5: Forestry and logging value added per forest area available for wood supply (1)

(EUR/hectare)



(1) Ranked on 2010; those Member States not shown: not available or not applicable.
(2) 2005: not available.
(3) Gross value added: 2009 instead of 2010.
(4) 2010: not available.

Source: Ministerial Conference for the Protection of Forests in Europe (Forest Europe) — State of Europe's Forests, 2011, supplemented by Eurostat estimates (online data codes: for_area and for_ieeaf_cp)

Table 7.7 provides some information in relation to employment within the EU's forestry and logging sector. The largest workforce was recorded in Romania, with 49 200 annual work units (AWUs) in 2010. There were also relatively large workforces in Germany (38 900 AWUs), Poland (36 800 AWUs in 2005), France (29 700 AWUs) and Sweden (25 000 AWUs); note that this information is incomplete with data only available for 18 of the EU Member States.

Table 7.7: Employment in forestry and logging

	Employment		Employment/ forest area available for wood supply		Apparent labour productivity			
	2005	2010	2005	2010	2005	2010	2005	2010
	(1 000 annual work units)		(annual work units/ 1 000 hectares)		(1 000 m3 removals/ annual work unit)		(EUR 1 000 gross value added/ annual work unit)	
BE	:	:	:	:	:	:	:	:
BG	13.3	13.0	5.2	4.5	0.4	0.4	6.3	15.8
CZ	27.4	24.4	10.9	10.5	0.6	0.7	18.1	27.1
DK	:	:	:	:	:	:	:	:
DE	*47.4*	*38.9*	4.5	*3.7*	1.2	*1.4*	36.6	*57.8*
EE	:	:	:	:	:	:	:	:
IE	:	:	:	:	:	:	:	:
EL	4.7	10.3	1.4	2.9	0.3	0.1	11.4	5.3
ES	:	:	:	:	:	:	:	:
FR	30.8	29.7	2.1	2.0	1.7	1.9	96.4	72.8
HR	:	:	:	:	:	:	:	:
IT	:	:	:	:	:	:	:	:
CY	0.1	0.1	2.9	3.4	0.1	0.1	13.1	14.0
LV	:	:	:	:	:	:	:	:
LT	:	:	:	:	:	:	:	:
LU	:	:	:	:	:	:	:	:
HU (1)	8.7	9.1	5.2	5.3	0.7	0.6	15.2	17.9
MT	:	0.0	:	-	:	-	:	:
NL	1.6	:	5.3	:	0.7	:	29.5	:
AT	19.0	19.9	5.7	6.0	0.9	0.9	46.0	54.0
PL	36.8	:	4.4	:	0.9	:	30.2	:
PT	12.0	*10.5*	6.7	*5.8*	0.9	*0.9*	55.3	*64.0*
RO	:	49.2	:	9.5	:	0.3	:	9.1
SI	6.0	5.4	5.1	4.6	0.5	0.6	18.8	34.4
SK	13.4	9.3	7.7	5.2	0.7	1.0	19.4	24.3
FI	20.0	25.0	1.0	1.3	2.6	2.0	121.1	110.6
SE	:	33.8	:	1.6	:	2.1	:	110.2
UK	12.0	14.0	5.1	5.8	0.7	0.7	24.6	26.6
NO	7.1	*11.8*	1.1	*1.8*	1.4	*0.9*	:	*48.7*
CH	7.2	*6.6*	6.1	*5.5*	0.7	*0.7*	25.9	*42.6*

(1) Employment and gross value added: 2009 instead of 2010.

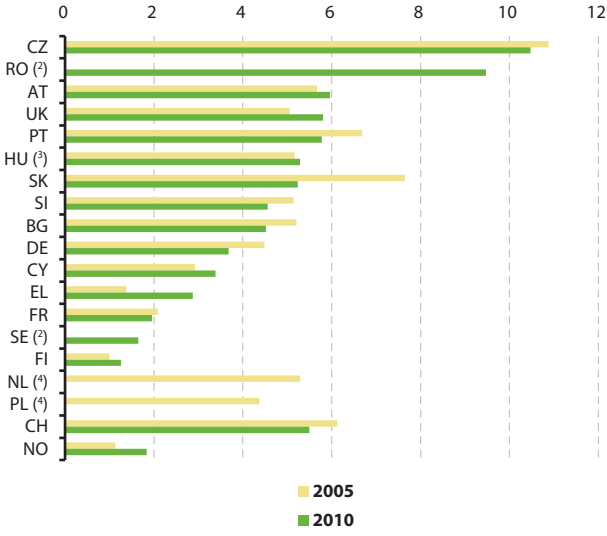
Source: Eurostat (online data codes: for_ieeaf_cp, for_awu, for_remov and for_area)

A ratio of labour input (as measured by AWUs) per area of exploited forest provides some information on the labour intensity of the forestry sector across the EU Member States. This indicator varies considerably between countries, ranging from a high of around 10 AWUs per 1 000 hectares in the Czech Republic and Romania to less than 2 AWU per 1 000 hectares in Sweden and Finland (see Figure 7.6). Some of the differences across countries may, at least in part, be explained by the local terrain that predominates in areas where forestry and logging takes place, as work in mountainous areas will generally require a higher level of labour input than work on large tracts of flat land.

The labour productivity of the forestry and logging sector (calculated as gross value added per AWU) also varied substantially across the EU Member States in 2010 (see Table 7.7). The highest levels of labour productivity — using this measure — were recorded in Finland and Sweden (at just over EUR 110 000), while at the other end of the range, Bulgaria, Cyprus, Romania and Greece recorded productivity levels that were below EUR 16 000 per AWU.

Figure 7.6: Employment per area of forest available for wood supply, 2005 and 2010 (1)

(annual work units/1 000 hectares)



(1) Ranked on 2010; those Member States not shown: not available or not applicable.
(2) 2005: not available.
(3) Employment: 2009 instead of 2010.
(4) 2010: not available.

Source: Ministerial Conference for the Protection of Forests in Europe (Forest Europe) — State of Europe's Forests, 2011; supplemented by Eurostat estimates (online data codes: for_ieeaf_cp, for_awu, for_remov and for_area)

Wood-based industries

The EU's wood-based industries cover a range of downstream activities, including woodworking industries, large parts of the furniture industry, pulp and paper manufacturing and converting industries, and the printing industry. Together, some 455 000 enterprises were active in wood-based industries across the EU-27; they represented more than one in five (21.4 %) manufacturing enterprises across the EU-27, highlighting that — with the exception of pulp and paper manufacturing that is characterised by economies of scale — many downstream wood-based industries had a relatively high number of small or medium-sized enterprises.

Between 2005 and 2010 the total number of enterprises within the EU-27's wood-based industries fell by 9.1 %. As such, the rate of decline was similar to the manufacturing average (-8.3 %). There were declines recorded for three of the four subsectors, with the biggest reduction registered for furniture manufacturing (-13.3 %). By contrast, the number of pulp and paper manufacturing enterprises in the EU-27 rose by 1 380 between 2005 and 2010 (+7.0 %).

Table 7.8: Main indicators for wood-based industries, EU-27, 2005 and 2010

Activity (NACE Rev. 2)	Number of enterprises (1 000s)		Gross value added at factor cost (EUR billion)		Number of persons employed (1 000s)	
	2005	2010	2005	2010	2005	2009
Manufacturing (C)	*2 322*	*2 130*	1 630	*1 590*	34 644	*31 000*
Wood-based industries (16+17+18.1+31)	*500*	*455*	*152*	*135*	*4 388*	*3 588*
Manufacture of wood and wood products (16)	*198*	*184*	*35*	*31*	*1 280*	*1 030*
Manufacture of pulp, paper and paper products (17)	20	*21*	*40*	*41*	*730*	658
Printing and services related to printing (18.1)	133	*120*	41	32	978	821
Manufacture of furniture (31)	*150*	*130*	*36*	*30*	*1 400*	*1 080*

Source: Eurostat (online data codes: sbs_na_2a_dade, sbs_na_2a_dfdn and sbs_na_ind_r2)

The economic weight of the wood-based industries in the EU-27 — as measured by EUR 135 billion of gross value added — was equivalent to 8.5 % of the manufacturing total in 2010. The distribution of value added across each of the four wood-based activities presented in Table 7.8 was spread relatively equally, as each subsector accounted for at least one fifth of the total added value added generated within the EU-27's wood-based industries in 2010; the highest share was recorded for pulp, paper and paper products manufacturing (30.4 % or EUR 41 billion).

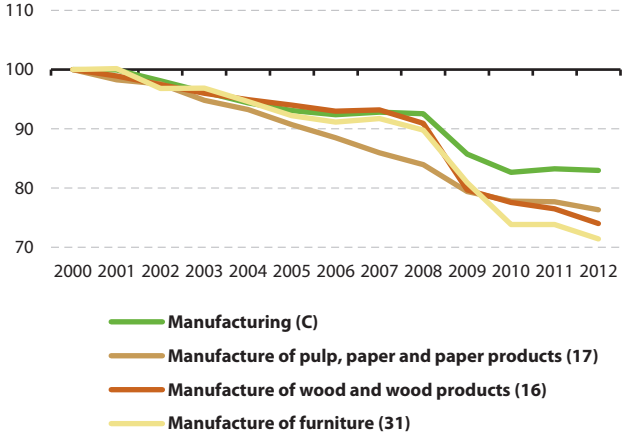
Between 2005 and 2010 the overall level of added value that was generated within the EU-27's manufacturing sector fell by 2.4 %. The corresponding decline in activity for the EU-27's wood-based industries was 4.5 times as large as the manufacturing average, as gross value added fell by 11.2 %. Double-digit reductions in activity were recorded for three of the four wood-based industries — with the largest decline in output recorded for printing and services related to printing (value added falling by one fifth from 2005–10). By contrast, the value added generated by the EU-27's pulp and paper manufacturing enterprises rose by 2.5 % between 2005 and 2010.

Wood-based industries employed 3.6 million persons across the EU-27 in 2009, which equated to an 11.6 % share of the manufacturing total. There were just over one million persons employed within the manufacture of wood and wood products and the manufacture of furniture, while the lowest level of labour input (658 000 persons) was recorded for the relatively capital-intensive and highly automated activity of pulp, paper and paper products manufacturing.

A longer time series and fresher data are available concerning the development of employment within three of the wood-based industries (no information available for printing). Across the EU-28, manufacturing employment fell by 17.0 % during the period 2000–12, while the largest losses among the three wood-based industries shown in Figure 7.7 were recorded for furniture manufacturing (28.6 % fewer persons employed).

Figure 7.7 shows that each of these wood-based industries, in keeping with most manufacturing sectors, experienced a reduction in their respective numbers of persons employed during the period 2000–12. The development of EU-28 employment for wood and wood products and furniture manufacturing followed closely the overall pattern for total manufacturing during the period 2000–08. Thereafter, with the onset of the financial and economic crisis, labour input reductions for these two wood-based industries accelerated at a faster pace than the manufacturing average. Furthermore, having remained unchanged in 2011, there was evidence of a further downturn in EU-28 employment for both of these subsectors in 2012. By contrast, pulp, paper and paper products manufacturing had a more uniform reduction in employment spread across the period 2000–12, and was relatively unaffected by the financial and economic crisis.

Figure 7.7: Employment in wood-based industries compared with total manufacturing, EU-28, 2000–12



Source: Eurostat (online data code: sts_inlb_a)

Tropical wood imports to the EU

The EU has agreed a voluntary scheme titled the Forest Law Enforcement, Governance and Trade (FLEGT) action plan to fight illegal logging and associated trade. One key element of the plan is to ensure that only legally harvested timber is imported to the EU. The EU legal framework for the scheme is a Council Regulation (EC) No 2173/2005 adopted in December 2005 'on the establishment of a FLEGT licensing scheme for imports of timber into the European Community' and a 2008 European Commission implementing Regulation (EC) No 1024/2008 laying down detailed measures for the introduction of the scheme.

Bilateral FLEGT agreements between the EU and various tropical wood producing nations are designed to halt trade in illegal timber, notably with a license scheme to verify the legality of timber exported to the EU. The first agreements to be formally concluded were with Cameroon, the Central African Republic, Ghana, Indonesia, Liberia, and Congo, while negotiations are on-going with Côte d'Ivoire, the Democratic Republic of the Congo, Gabon, Guyana, Honduras, Malaysia and Vietnam; Laos and Thailand are preparing to negotiate.

The statistics shown in Table 7.9 therefore relate to the potential value of legal timber that could enter the EU from tropical wood partners with bilateral FLEGT agreements. The value of tropical wood imports into the EU-27 reached a peak of EUR 2.3 billion in 2007, before falling by 14.8 % in 2008 and by a considerably greater amount (-40.0 %) at the height of the financial and economic crisis, illustrating how the recession hit these high-value imports. There was a modest recovery in 2010 (imports rising by 10.7 %), and almost no change in 2011, when the EU-27's imports of tropical wood were valued at EUR 1.3 billion.

The countries that are presented in the table accounted for approximately 80 % of the EU-27's tropical wood imports (in value terms) during the period 2000–11. The main origin of tropical wood imports in 2011 was Cameroon (21.9 % of the total), while Malaysia (16.8 %) and Gabon (12.5 %) were the only other partners to account for a double-digit share of the EU's total imports of tropical wood.

Table 7.9: Tropical wood imports, EU-27, 2000–11

(EUR million)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Cameroon	421.8	394.3	327.2	323.5	339.8	383.7	349.6	404.8	340.3	208.7	252.8	277.6
Central African Republic	29.5	36.3	28.5	32.4	25.1	22.3	26.7	22.7	19.7	11.0	9.8	10.3
Congo	68.2	73.3	93.7	89.3	104.1	89.0	85.3	77.1	78.1	35.6	55.7	54.2
Côte d'Ivoire	201.8	218.5	185.3	162.3	187.6	195.2	170.5	187.5	178.1	92.9	103.7	87.6
Democratic Republic of the Congo	18.6	17.2	22.2	22.5	36.6	60.2	83.5	100.5	85.5	41.5	47.6	51.1
Gabon	195.9	218.1	205.0	194.6	220.9	226.0	207.4	268.1	249.2	169.6	161.5	158.1
Ghana	102.0	108.2	96.5	90.1	85.8	84.6	67.0	68.9	64.2	34.5	35.1	33.2
Guyana	0.3	0.6	1.1	0.6	0.7	1.6	2.1	2.7	3.7	2.5	2.5	1.2
Honduras	0.1	0.1	0.2	0.2	0.1	0.1	0.3	0.7	0.2	0.6	0.3	0.2
Indonesia	122.8	92.5	80.6	85.4	80.7	88.7	80.9	135.1	132.8	100.8	107.3	103.3
Liberia	61.2	60.6	62.6	37.9	0.0	0.0	0.0	0.0	0.3	0.7	1.2	5.6
Malaysia	390.9	274.7	263.4	266.2	255.1	258.2	329.0	325.7	295.4	211.2	228.5	213.3
Thailand	19.9	18.6	17.9	18.6	16.9	17.4	16.4	17.3	17.0	6.0	4.7	4.1
Vietnam	0.2	0.4	0.5	0.5	0.5	0.4	0.6	1.0	1.4	0.4	0.3	0.7
Sum of the 14 countries above	1 633.2	1 513.4	1 384.6	1 324.2	1 353.9	1 427.4	1 419.2	1 612.3	1 465.9	916.0	1 011.2	1 000.5
All countries of the world	1 966.4	1 864.9	1 695.2	1 645.2	1 727.3	1 854.1	1 824.9	2 300.0	1 960.4	1 176.9	1 303.0	1 267.3

Source: Eurostat (online data code: for_trop)

DATA SOURCES AND AVAILABILITY

Eurostat, the Timber Committee of the United Nations Economic Commission for Europe (UNECE), the Forestry Section of the United Nations Food and Agriculture Organisation (FAO) and the International Tropical Timber Organisation (ITTO) collect and collate statistics on the production and trade of wood through their Joint Forest Sector Questionnaire. Each partner collects data from a different part of the world; Eurostat is responsible for the data collection exercise pertaining to the EU Member States and EFTA countries.

Eurostat produces annual data on forestry using two questionnaires:

- the Joint Forest Sector Questionnaire (JFSQ) on production and trade in wood and wood products;
- integrated environmental and economic accounting for forests (IEEAF); countries are currently providing data on economic accounts for forestry and logging, forming part of an environmental satellite accounts initiative that started in the late 1990s.

The JFSQ provides data on supply balances for wood products. The data have also been used for: modelling whether supply will match demand in the future due to competing uses for materials and for energy; estimating carbon in harvested wood products for post-Kyoto negotiations.

The collection of data for integrated environmental and economic accounting for forests restarted in 2008 after a break of several years. This data provides, among others, information relating to the economic viability of forestry, employment in forestry and logging and the multi-functionality of forests (in other words, the alternative roles that may be played by forests (for example, protecting water resources, preventing avalanches and mudslides, improving carbon sequestration, or providing habitats where biodiversity thrives). Note that the monetary values concern current basic prices (in other words, the analysis of time series is not adjusted for inflation).

8

Fisheries

Fish are a natural, biological, mobile (sometimes over long distances) and renewable resource. Aside from fish farming, fish in the wild are generally not owned until they have been caught; although some lakes and stretches of rivers may be privately owned. As such, fish stocks continue to be regarded as a common resource which needs to be managed collectively. This has led to a range of policies that regulate the amount of fishing, as well as the types of fishing techniques and gear that can be used in fish capture. At a European level, Eurostat collects data on catches and landings of various fishery products, aquaculture production and the size and power of fishing fleets. The collection of this information is carried out in collaboration with other international organisations.

The main objective of the Common Fisheries Policy (CFP) is to ensure sustainable exploitation of fisheries resources. Fleet capacity is an essential tool for achieving this aim. The European Union (EU) fleet, however, is very diverse, with the vast majority of boats being no more than 12 metres long but a small number of vessels being over 40 metres. Under EU legislation, the total capacity of the fishing fleet may not be increased. If public funds have been used to decommission a fishing vessel, then the corresponding capacity cannot be replaced or transferred; the reduction in fleet capacity is made permanent.

Fishing fleet

The EU's fishing fleet capacity has declined fairly steadily since the early 1990s, in terms of both tonnage (an indicator of fish-holding capacity) and engine power (an indicator of the power available for fishing gear). The EU-27 fishing fleet had fallen to about 81 000 vessels in 2012; the number of vessels for just the EU-15 being 104 000 in 1995. The EU's fishing fleet in 2012 had a combined 1.6 million gross tonnes of capacity with a total engine power of 6.3 million kilowatts.

About one fifth (20.0 %) of the EU-27's fishing fleet was registered in Greece. On average, however, these vessels were small, with an average size of 5.0 gross tonnes (much less than the EU-27 average of 20.2) and an average engine power of 28.9 kilowatts in 2012 (compared with an EU-27 average of 77.1 kilowatts). In terms of capacity, Spain, the United Kingdom, France and Italy had the largest fishing fleets, accounting for a combined majority of gross tonnage (56.5 % in 2012) and engine power (59.3 % in 2012).

Table 8.1: Fishing fleet, 2008–12

(number of vessels)

	2008	2009	2010	2011	2012
EU-27	86 587	84 502	83 796	82 096	81 073
BE	100	89	89	86	83
BG	2 852	2 206	2 340	2 336	2 352
CZ	-	-	-	-	-
DK	2 895	2 832	2 826	2 784	2 747
DE	1 828	1 769	1 680	1 589	1 559
EE	966	945	935	923	1 357
IE	2 023	2 109	2 148	2 189	2 239
EL	17 353	17 291	17 168	16 605	16 249
ES	11 420	11 119	10 847	10 504	10 143
FR (1)	7 941	7 284	7 242	7 209	7 148
HR	:	:	:	:	:
IT	13 683	13 587	13 515	13 059	12 783
CY	1 169	1 162	1 006	1 080	1 074
LV	841	794	786	731	719
LT	221	193	171	151	148
LU	-	-	-	-	-
HU	-	-	-	-	-
MT	1 152	1 112	1 093	1 054	1 043
NL	825	838	849	842	849
AT	-	-	-	-	-
PL	833	807	793	790	792
PT	8 585	8 556	8 492	8 349	8 291
RO	438	444	475	502	273
SI	181	185	185	183	177
SK	-	-	-	-	-
FI	3 240	3 271	3 365	3 332	3 240
SE	1 486	1 418	1 369	1 369	1 401
UK	6 555	6 491	6 422	6 429	6 406
IS	1 533	1 585	1 628	1 658	1 691
NO	6 785	6 506	6 309	6 250	6 213

(1) French data include vessels registered in the French Overseas Departments.

Source: Eurostat (online data code: fish_fleet)

The capacities of most national fishing fleets declined in the short period between 2008 and 2012 (there being little change in Finland and the Netherlands in terms of tonnage). The downsizing of capacity in Spain, France and Italy was in line with the average for the EU-27 for this period, but was smaller for the United Kingdom.

Table 8.2: Fishing fleet, by tonnage, 2008–12

(total gross tonnage)

	2008	2009	2010	2011	2012
EU-27	1 869 330	1 820 434	1 753 928	1 687 310	1 636 312
BE	19 007	16 048	15 812	15 326	15 053
BG	9 047	7 772	8 014	7 373	7 091
CZ	-	-	-	-	-
DK	73 040	67 734	66 353	64 499	64 370
DE	69 135	68 161	67 765	64 935	64 182
EE	17 808	14 238	14 645	14 281	15 149
IE	69 867	68 759	69 427	64 268	65 096
EL	88 805	88 360	88 288	83 739	80 783
ES	461 071	439 594	414 527	398 892	387 503
FR (1)	199 269	185 535	174 461	170 818	169 683
HR	:	:	:	:	:
IT	196 313	193 672	186 079	175 368	165 619
CY	5 383	5 289	4 161	4 213	4 250
LV	38 228	41 186	40 762	34 725	33 797
LT	50 478	49 286	45 961	45 216	27 187
LU	-	-	-	-	-
HU	-	-	-	-	-
MT	10 961	12 030	11 992	7 996	7 998
NL	146 925	154 369	147 520	151 703	145 451
AT	-	-	-	-	-
PL	40 971	38 249	37 269	33 379	33 337
PT	106 516	103 931	101 483	100 949	100 670
RO	1 670	1 871	1 221	935	628
SI	983	1 011	1 011	1 000	654
SK	-	-	-	-	-
FI	16 046	16 535	16 549	16 026	16 130
SE	41 807	38 600	33 020	29 647	30 705
UK	206 000	208 204	207 608	202 022	200 976
IS	160 246	157 175	150 431	158 781	164 962
NO	378 690	383 794	366 123	389 468	378 887

(1) French data include vessels registered in the French Overseas Departments.

Source: Eurostat (online data code: fish_fleet)

This reduced capacity in the EU-27 was in contrast to the maintenance of fishing fleet capacities in Iceland and Norway. The capacity of the Norwegian fishing fleet (about 380 000 gross tonnes) was similar to Spain in terms of overall tonnage (although the average of 61.0 gross tonnes per vessel was considerably higher than in Spain), while the Norwegian fishing fleet was considerably larger than that of any EU Member State in terms of engine power. In the case of Iceland, despite having a much smaller fleet than France and Italy in terms of numbers of vessels, the overall holding capacity (gross tonnage) was very similar.

Table 8.3: Fishing fleet, by total engine power, 2008–12
(kW)

	2008	2009	2010	2011	2012
EU-27	6 878 037	6 677 415	6 543 252	6 361 945	6 252 144
BE	60 620	51 590	51 236	49 135	47 794
BG	70 512	60 319	63 378	61 307	61 084
CZ	-	-	-	-	-
DK	263 914	245 793	241 962	232 440	228 851
DE	161 248	161 507	159 714	150 128	147 526
EE	45 974	39 813	40 209	38 915	46 325
IE	193 409	193 888	198 008	194 992	197 360
EL	510 993	507 623	506 358	482 725	469 819
ES	1 029 530	979 667	934 078	900 602	877 591
FR (1)	1 082 260	1 007 735	996 189	1 000 595	1 001 659
HR	:	:	:	:	:
IT	1 149 081	1 136 689	1 111 999	1 056 777	1 020 229
CY	49 023	48 447	42 930	45 329	45 662
LV	61 080	62 450	61 448	52 684	51 231
LT	59 794	56 380	54 391	54 357	34 389
LU	-	-	-	-	-
HU	-	-	-	-	-
MT	86 161	87 026	85 532	77 489	76 596
NL	344 073	348 380	343 146	341 778	332 019
AT	-	-	-	-	-
PL	98 958	90 700	86 851	82 890	81 789
PT	383 099	379 632	372 173	370 552	367 886
RO	6 241	7 173	6 577	7 670	6 153
SI	10 653	10 948	10 951	10 755	9 196
SK	-	-	-	-	-
FI	169 707	171 244	172 233	171 167	169 972
SE	208 913	196 617	179 032	170 497	173 644
UK	832 794	833 794	824 857	809 161	805 368
IS	477 014	474 917	469 556	479 181	495 729
NO	1 240 166	1 252 031	1 237 694	1 101 890	1 247 224

(1) French data include vessels registered in the French Overseas Departments.

Source: Eurostat (online data code: fish_fleet)

Total production

The EU was one of the biggest fishery producers in the world in 2010 (accounting for a little less than 5 % of global production) albeit dwarfed by production from China, which accounted for about one third of global output.

Total fishery production covers total catches excluding inland catches as well as aquaculture production excluding the output of fish hatcheries and nurseries. The total production of fishery products in the EU was an estimated 6.1 million tonnes of live weight equivalent (in other words, the mass or weight when removed from water) in 2011. It should be noted that this figure exclude catches data for the Czech Republic, Hungary, Austria and Slovakia as well as aquaculture production in Belgium. The EU figure for 2011 suggests there was another fall in fishery production, continuing the steady decline noted over the previous 20 years.

Within the EU, the three largest fishery producers in terms of volume in 2011 were Spain (1.1 million live weight tonnes), the United Kingdom (0.8 million live weight tonnes) and Denmark (0.8 million live weight tonnes). Despite the overall downward development of fishery production at an EU level, output from each of these countries was estimated to have increased between 2007 and 2011 (see Table 8.4). Total fisheries production in Spain rebounded strongly in 2011 and was estimated to be 11.0 % higher than in 2007; production in United Kingdom declined in 2011 but remained similar (1.0 % higher) than its level from 2007, and; despite a sharp decline in 2011 (a fall of 10.4 % on the year before), total fishery production in Denmark was 12.7 % higher than in 2007. By contrast, there were some sharp declines in production among other principal producers from the EU Member States: in the Netherlands and Portugal the decline in fishery production during the period 2007–11 was 10–15 %, and in Italy, Germany and Sweden slightly more than 20 %.

It is also worth noting that total fisheries production in Iceland (1.2 million tonnes of live weight) and Norway (3.3 million tonnes of live weight) was larger than that of any of the EU Member States in 2011. Although production in Norway was lower in 2011 than in 2010, it remained 3.6 % higher than its level in 2007. By contrast, although production in Iceland was higher in 2011 than in 2010, it remained almost a fifth (-18.7 %) below its level of 2007.

Table 8.4: Production, all fishery products, 2007–11
(tonnes live weight)

	2007 (1)	2008 (1)	2009	2010	2011 (2)
EU-28	*6 550 033*	6 496 385	6 441 667	6 268 763	6 130 392
BE (3)	24 539	22 609	22 295	22 954	22 191
BG	13 336	16 114	16 891	18 686	16 047
CZ	24 723	24 559	24 183	24 410	21 010
DK	684 184	727 837	811 878	860 344	770 763
DE	340 462	324 056	290 304	270 592	263 758
EE	100 225	101 513	98 077	95 857	78 362
IE	267 527	250 217	316 292	365 069	250 466
EL	208 266	203 769	204 735	192 010	169 422
ES	1 021 788	1 171 013	1 029 182	992 654	1 134 253
FR	795 813	737 743	676 361	645 531	650 419
HR	*65 078*	65 443	72 119	68 539	84 993
IT	467 631	393 623	415 326	387 499	376 857
CY	5 425	5 788	4 767	5 506	5 830
LV	156 001	158 518	163 728	165 367	156 676
LT	190 874	185 766	176 117	142 773	140 351
LU	-	-	-	-	-
HU	22 946	22 367	20 510	19 853	15 509
MT	9 833	8 009	7 206	8 717	4 874
NL	467 011	463 369	437 655	352 228	408 684
AT	2 889	2 437	2 491	2 517	2 909
PL	186 746	179 312	260 397	185 433	195 706
PT	260 561	231 542	205 655	230 790	223 945
RO	16 496	17 906	17 151	11 469	11 607
SI	2 465	2 191	2 339	1 710	2 116
SK	3 193	2 733	2 584	2 559	913
FI	177 704	164 596	168 223	163 161	130 963
SE	243 619	238 935	211 953	222 677	193 277
UK	790 698	774 420	783 248	809 858	798 491
IS	1 425 413	1 311 680	1 169 597	1 068 020	1 159 118
NO	3 208 595	3 279 102	3 486 280	3 582 405	3 322 904

(1) EU-28: excluding Belgium for aquaculture.
(2) EU-28: excluding the Czech Republic, Hungary, Austria and Slovakia for catches and Belgium for aquaculture.
(3) 2007–08 and 2011: catches only.

Source: Eurostat (online data codes: fish_ca00, fish_aq_q and fish_aq2a)

Catches

About 80 % of the EU-28's total fishery production relates to catches. The live weight of catches for the EU-28 was 5.0 million tonnes in 2010. From the data available for 2011, it is possible to estimate that the volume of catches fell by 2–3 % to about 4.9 million tonnes of live weight. This would represent an overall decline of about 40 % or 3.2 million tonnes of live weight since 1995. The development of catches among the EU Member States during the period from 2007–11 closely mirrored the patterns highlighted above for fisheries production.

Table 8.5: Catches, 2007–11

(tonnes live weight)

	2007	2008	2009	2010	2011 (1)
EU-28	5 228 357	5 224 866	5 123 605	4 996 635	4 877 024
BE	24 539	22 609	21 719	22 415	22 191
BG	8 905	8 863	8 979	10 766	8 956
CZ	4 276	4 164	4 112	3 990	:
DK	653 016	690 621	777 747	828 014	738 846
DE	295 463	280 079	250 347	229 898	224 592
EE	99 447	101 038	97 423	95 284	77 942
IE	215 023	205 346	269 080	318 881	206 177
EL	95 078	88 881	82 764	71 028	62 847
ES	738 041	918 775	760 725	738 870	860 030
FR	558 362	499 494	439 922	442 514	443 549
HR	48 691	49 056	55 790	52 853	70 534
IT	286 643	235 758	253 001	233 873	212 730
CY	2 225	2 012	1 411	1 400	1 163
LV	155 272	157 935	163 211	164 818	156 130
LT	187 496	182 758	172 689	139 555	137 063
LU	-	-	-	-	-
HU	7 024	7 394	6 366	6 216	:
MT	1 244	1 282	1 587	1 836	1 920
NL	413 640	416 748	382 094	285 433	364 964
AT	350	350	350	350	:
PL	151 818	142 499	223 894	148 930	169 593
PT	253 090	224 190	198 928	222 565	214 779
RO	6 183	5 410	4 020	2 688	3 254
SI	1 111	876	1 031	932	719
SK	1 994	1 655	1 761	1 608	:
FI	164 674	151 157	154 596	151 390	119 686
SE	238 254	231 339	203 413	212 034	179 836
UK	616 498	594 577	586 645	608 494	599 523
IS	1 420 590	1 306 592	1 164 432	1 062 970	1 153 812
NO	2 378 405	2 430 696	2 524 440	2 562 693	2 178 085

(1) EU-28: sum of available Member States; marine catches only.

Source: Eurostat (online data code: fish_ca00)

Although the European fishing fleet operates worldwide, EU catches are taken primarily from the Eastern Atlantic and the Mediterranean (see Table 8.6). Indeed, almost 70 % of EU-28 catches were made in the North East Atlantic in 2011, with about another fifth coming from the Eastern Central Atlantic (12.7 %) and the Mediterranean and Black Sea (9.7 %).

Table 8.6: Catches, by fishing area, 2011
(1 000 tonnes live weight, rounded)

	Fishing area							
	North West Atlantic	North East Atlantic	Eastern Central Atlantic	Mediterranean and Black Sea	South West Atlantic	South East Atlantic	Western Indian Ocean	Other
EU-28	62	3 344	618	471	101	19	110	151
BE	-	22	-	-	-	-	-	-
BG	-	-	-	9	-	-	-	-
CZ	-	-	-	-	-	-	-	-
DK	5	733	-	-	-	-	-	-
DE	2	187	35	-	-	-	-	-
EE	7	69	-	-	2	-	-	-
IE	-	206	0	-	-	-	-	-
EL	-	-	1	62	-	-	-	-
ES	28	355	143	104	90	17	61	61
FR	-	350	32	12	1	1	47	-
HR	-	-	-	71	-	-	-	-
IT	-	-	2	211	-	-	-	-
CY	-	-	-	1	-	-	-	-
LV	1	66	90	-	-	-	-	-
LT	1	22	114	-	-	-	-	-
LU	-	-	-	-	-	-	-	-
HU	-	-	-	-	-	-	-	-
MT	-	-	-	2	-	-	-	-
NL	-	159	121	-	-	-	-	85
AT	-	-	-	-	-	-	-	-
PL	-	109	60	-	-	-	-	-
PT	16	179	11	0	5	1	1	1
RO	-	-	-	0	-	-	-	3
SI	-	-	-	1	-	-	-	-
SK	-	-	-	-	-	-	-	-
FI	-	120	-	-	-	-	-	-
SE	-	180	-	-	-	-	-	-
UK	1	587	8	-	3	-	0	-
IS	0	1 154	-	-	-	-	-	-
NO	3	2 175	-	-	-	-	-	-

Source: Eurostat (online data code: fish_ca_main)

Landings

Landings data relate to fishery products (product weight and value) landed in a country regardless of the nationality of the vessel making the landings. The figures for a reporting country therefore exclude landings by vessels of the reporting country into foreign ports. A little over one fifth (21.4 % or 0.9 million tonnes of live weight) of the landings to EU-28 ports in 2011 were made in Denmark, the highest share among the EU Member States. Only landings to Spanish ports (0.7 million tonnes of product weight) came close to the level recorded for Denmark in 2011. By contrast, landings to ports in Iceland (1.1 million tonnes) and Norway (2.0 million tonnes) were much higher.

Table 8.7: Landings, by weight, 2007–11
(tonnes product weight)

	2007	2008	2009	2010	2011
EU-28 (1)	5 297 790	4 586 140	4 533 795	4 544 035	4 252 824
BE	19 120	17 349	16 016	16 129	16 968
BG	7 831	7 652	7 393	9 674	8 956
CZ	-	-	-	-	-
DK	1 063 873	984 766	1 054 957	1 066 559	911 255
DE	308 197	225 246	245 186	250 456	265 055
EE	76 726	83 143	88 843	87 373	70 842
IE	244 296	209 667	247 050	247 841	180 970
EL	93 640	87 461	81 822	70 090	66 668
ES	836 771	891 284	703 945	755 465	712 677
FR	310 958	285 861	319 603	254 876	321 825
HR	:	:	:	:	69 701
IT	276 743	227 160	242 581	229 236	212 731
CY	2 019	1 868	1 309	1 378	1 162
LV	80 998	85 767	71 531	67 134	59 317
LT	15 293	7 532	9 128	5 536	6 391
LU	-	-	-	-	-
HU	-	-	-	-	-
MT	1 252	1 298	1 607	1 845	1 925
NL	882 233	436 114	464 260	444 132	388 085
AT	-	-	-	-	-
PL	79 054	65 790	80 147	84 013	88 034
PT	181 403	185 209	164 552	182 940	181 626
RO	518	444	332	231	537
SI	914	687	867	764	719
SK	-	-	-	-	-
FI	92 793	90 686	84 400	82 989	78 289
SE	242 223	226 982	216 591	220 923	171 329
UK	480 935	464 174	431 675	464 453	437 762
IS	1 370 013	1 257 896	1 004 665	1 017 594	1 146 700
NO	2 182 349	2 216 894	2 411 640	2 421 632	1 966 277

(1) EU-27: 2007–10.

Source: Eurostat (online data code: fish_ld)

Denmark only accounted for a relatively small share (7.0 % in 2011) of EU-27 landings in terms of value. One quarter of the value of landings for the EU-27 in 2011 came into Spanish ports (25.1 % or EUR 1.8 billion), reflecting the high value attached to its landings of species like tuna, pilchards, hake, squid and octopus. Landings in Italy had the next highest value (EUR 1.1 billion), followed by France and the United Kingdom. The value of landings to ports in Iceland (EUR 1.0 billion) and Norway (EUR 2.0 billion) were closer to the values in Italy and Spain respectively, reflecting the lower average price of the species landed in each of these countries.

Table 8.8: Landings, by value, 2007–11

(EUR million)

	2007	2008	2009	2010	2011
EU-28 (1)	7 505.0	6 878.4	6 619.8	6 633.8	*7 046.2*
BE	80.4	66.8	59.6	65.8	69.8
BG	2.8	3.1	3.1	2.3	3.5
CZ	-	-	-	-	-
DK	502.6	432.5	360.4	461.7	494.8
DE	119.4	127.1	90.2	124.9	129.6
EE	17.4	18.8	18.2	17.8	18.4
IE	364.2	249.7	236.0	288.3	261.2
EL	524.1	486.6	458.8	399.1	368.3
ES	1 671.8	1 916.0	1 793.2	1 869.4	1 765.8
FR	789.9	706.2	785.3	527.1	910.0
HR	:	:	:	:	81.0
IT	1 365.1	1 106.9	1 210.0	1 147.5	1 103.5
CY	4.1	12.7	8.6	10.1	8.0
LV	16.9	20.3	13.6	12.8	16.7
LT	9.5	6.3	6.7	5.0	7.1
LU	-	-	-	-	-
HU	-	-	-	-	-
MT	7.4	8.3	8.8	8.9	11.4
NL	736.0	559.8	535.3	*573.2*	563.1
AT	-	-	-	-	-
PL	36.4	34.2	38.0	41.5	45.3
PT	241.4	257.0	223.8	237.5	250.7
RO	0.7	0.7	0.6	0.5	1.5
SI	1.8	1.4	1.7	2.0	2.0
SK	-	-	-	-	-
FI	17.6	19.2	18.0	19.4	24.3
SE	121.5	104.5	90.3	99.9	104.0
UK	874.0	740.1	659.7	719.2	806.3
IS	989.1	750.6	714.6	807.2	1 028.6
NO	1 677.1	1 663.3	1 453.3	1 757.7	2 013.2

(1) EU-27: 2007–10.

Source: Eurostat (online data code: fish_ld)

Aquaculture

A broad range of species are farmed in aquaculture within the EU; the main species are Mediterranean mussel, rainbow trout, blue mussel, Atlantic salmon, Pacific cupped oyster and gilthead seabream.

About one fifth of the EU-28's total fishery production comes from aquaculture; production was 1.3 million tonnes of live weight in 2011. This represented a decline in aquaculture production of about 12 % after the relative peak of 1999.

The four largest aquaculture producers among the EU Member States were Spain, France, the United Kingdom and Italy, which together accounted for almost two thirds of the EU-28's aquaculture production in 2011. Aquaculture in each of these countries tends to be specialised: mussels accounted for about three quarters (76.1 %) of the live weight from aquaculture in Spain in 2011; oysters accounted for two fifths (40.8 %) and mussels about one third (36.1 %) of the live weight in France; salmon, trout and smelts accounted for the vast majority (85.9 %) of total aquaculture production in the United Kingdom; and mussels accounted for about half (48.4 %) and clams, cockles and arkshells for one fifth (19.6 %) of total aquaculture production in Italy.

There was a clear downward trend in aquaculture production levels in France and Italy between the late 1990s and 2010, although there was a small upswing in 2011. By contrast, there was relatively steady growth in the United Kingdom, although much of this was limited to the period through until 2004. Annual production levels in Spain fluctuated more widely than the other three main producer countries but the level of aquaculture production in 2011 was in the broad range recorded for most of the period since the early 2000s, although down from relative peaks recorded at the end of the 1990s.

Aquaculture production in Norway was almost as large in 2011 (1.1 million tonnes of live weight) as it was for the whole of the EU-28. Unlike developments for the EU, aquaculture production in Norway continued to expand rapidly after the late 1990s, continuing the trend since the establishment of aquaculture in the early 1980s. Even in the short period between 2007 and 2011, aquaculture production levels in Norway grew sharply (up 37.9 %). This growth has been largely focused on a single species, the Atlantic salmon.

Table 8.9: Aquaculture production, 2007–11

(tonnes live weight)

	2007 (1)	2008 (1)	2009	2010	2011 (1)
EU-28	*1 321 676*	1 271 519	1 318 062	1 272 128	1 253 368
BE (2)	:	:	576	539	:
BG	4 431	7 251	7 912	7 920	7 091
CZ	20 447	20 395	20 071	20 420	21 010
DK	31 168	37 216	34 131	32 330	31 917
DE	44 999	43 977	39 957	40 694	39 166
EE	778	475	654	573	420
IE	52 504	44 871	47 212	46 188	44 289
EL	113 188	114 888	121 971	120 982	106 575
ES	283 747	252 238	268 457	253 784	274 223
FR	237 451	238 249	236 439	203 017	206 870
HR	*16 387*	16 387	16 329	15 686	14 459
IT	180 988	157 865	162 325	153 626	164 127
CY	3 200	3 776	3 356	4 106	4 667
LV	729	583	517	549	546
LT	3 378	3 008	3 428	3 218	3 288
LU	-	-	-	-	-
HU	15 922	14 973	14 144	13 637	15 509
MT	8 589	6 727	5 619	6 881	2 954
NL	53 371	46 621	55 561	66 795	43 720
AT	2 539	2 087	2 141	2 167	2 909
PL	34 928	36 813	36 503	36 503	26 113
PT	7 471	7 352	6 727	8 225	9 166
RO	10 313	12 496	13 131	8 781	8 353
SI	1 354	1 315	1 308	778	1 397
SK	1 199	1 078	823	951	913
FI	13 030	13 439	13 627	11 771	11 277
SE	5 365	7 596	8 540	10 643	13 441
UK	174 200	179 843	196 603	201 364	198 968
IS	4 823	5 088	5 165	5 050	5 306
NO	830 190	848 406	961 840	1 019 712	1 144 819

(1) EU-28: sum of available Member States.
(2) 2007–08 and 2011: production under the threshold mentioned in article 3 of Regulation 762/2008, therefore not available.

Source: Eurostat (online data codes: fish_aq_q and fish_aq2a)

DATA SOURCES AND AVAILABILITY

Fishery statistics are collected from official national sources either directly by Eurostat for the members of the European Economic Area (EEA) or indirectly through other international organisations for other countries. The data are collected using internationally agreed concepts and definitions developed by the coordinating working party on fishery statistics (CWP), comprising Eurostat and several other international organisations with responsibilities in fishery statistics. The flag of the fishing vessel is used as the primary indication of the nationality of the catch, though this concept may vary in certain circumstances.

Concerning the fishing fleet, the data for the EU Member States are derived from the Community Fishing Fleet Register maintained by the European Commission's Directorate-General for Fisheries and Maritime Affairs. Data for Iceland and Norway are compiled from fleet files submitted by the national authorities. Gross tonnage (GT) under the London convention (1969) was adopted as the unit of tonnage measurement in the 1990s. This was a change from the previously used gross registered tonnage (GRT) under the Oslo convention (1946). Implementation of the change involved re-measurement of vessels over time. This was carried out at different rates in different countries and was largely complete by 2003. However care should be taken when comparing data between countries and over time since the GT of a vessel is generally significantly greater than the GRT.

Catch statistics are submitted to Eurostat by EEA member countries in compliance with the following EU legislation:

- Regulation (EC) No 218/2009 of 11 March 2009 on the submission of nominal catch statistics by Member States fishing in the North-East Atlantic (OJ L87 of 31.03.2009);
- Regulation (EC) No 217/2009 of 11 March 2009 on the submission of catch and activity statistics by Member States fishing in the North-West Atlantic (OJ L87 of 31.03.2009);
- Regulation (EC) No 216/2009 of 11 March 2009 on the submission of nominal catch statistics by Member States fishing in certain areas other than those of the North Atlantic (OJ L87 of 31.03.2009, p.1)

Regional fisheries organisations and the United Nations Food and Agriculture Organisation (FAO) make the data for non-EEA countries available to Eurostat.

The national authorities are requested to submit catch statistics for all commercial, subsistence and recreational fisheries. However, the reporting of data for recreational fisheries is known to be incomplete.

The data are reported as the live weight equivalent of the landings (in other words, the landed weight of a product to which an appropriate conversion factor has been applied). The data therefore exclude quantities of fishery products which are caught but not landed. For example, fish caught but rejected at sea (a non-commercial species, under-sized fish, etc.) or fish consumed on board the vessel.

Each EEA member country reports annual data on the quantities and values of fishery products landed in its ports under the terms of:

Regulation (EC) 1921/2006 of 18 December 2006 on the submission of statistical data on landings of fishery products in Member States and repealing Council Regulation (EEC)1382/91 (OJ L403 of 30 December 2006).

Data for landings (expressed as the product weight) relate to all fishery products landed in the reporting country, regardless of the nationality of the vessel making the landings. Landings by vessels of the reporting country in foreign ports are excluded.

The national authorities of EEA countries submit aquaculture production data to Eurostat under the terms of:

Regulation (EC) No 762/2008 of 9 July 2008 on the submission by Member States of statistics on aquaculture and repealing Council Regulation (EC) 788/96 (OJ L218 of 13.08.2008).

Regulation (EC) No 788/96 of 22 April 1996 on the submission by Member States of statistics on aquaculture production (OJL108 of 01.05.1996).

Annexes

Data coverage

Eurostat online databases contain a large amount of metadata that provides information on the status of particular values or data series. In order to improve readability of this pocketbook, only the most significant meta information has been included under the tables and figures. The following symbols are used, where necessary:

Italic data value is forecasted, provisional or estimated and is likely to change;
: not available, confidential or unreliable value;
– not applicable.

Breaks in series are indicated in the footnotes provided under each table and figure.

This publication generally presents information for the EU-28 (the 28 Member States of the EU), as well as the individual EU Member States. The order of the Member States in tables and figures generally follows their order of protocol; in other words, the alphabetical order of the countries' names in their respective original languages; in some of the figures the data are ranked according to the values of a particular indicator.

The EU-28 aggregate is provided when information for all of the countries is available, or if an estimate has been made for missing information. Any incomplete totals that are created are systematically footnoted. Time series for the EU-28 aggregate are based on a consistent set of countries for the whole of the time period (unless otherwise indicated). In other words, although the EU only had 27 Member States from the start of 2007 to mid-2013 (before the accession of Croatia), the time series for EU-28 refer to the sum or an average of all 28 countries, as if all 28 Member States had been part of the EU in earlier periods.

When available, information is also presented for EFTA countries (including Iceland that is also a candidate country) and the candidate countries (Montenegro, the former Yugoslav Republic of Macedonia, Serbia and Turkey). In the event that data for any of these non-member countries are not available, they have been excluded from the tables and figures presented.

If data are not available for a particular country, then efforts have been made to fill tables and figures with data for previous reference periods (these exceptions are footnoted); generally, an effort has been made to go back at least two years, for example showing data for 2010 or 2011 if data for 2012 are not yet available.

Glossary

Agricultural holding

An **agricultural holding** is a single unit, in both technical and economic terms, operating under a single management, which undertakes agricultural activities within the economic territory of the European Union (EU), either as its primary or secondary activity. Other supplementary (non-agricultural) products and services may also be provided by the holding.

Agri-environmental indicators

A set of 28 **agri-environmental indicators** has been proposed for monitoring the integration of environmental concerns into the Common Agricultural Policy (CAP). In the context of the 'Renewed EU Sustainable Development Strategy', these indicators serve to:

- provide information on the farmed environment;
- track the impact of agriculture on the environment;
- assess the impact of agricultural and environmental policies on environmental management of farms;
- inform agricultural and environmental policy decisions;
- illustrate agri-environmental relationships to the broader public.

Agricultural income

The main indicator for **agricultural income** is 'factor income per labour input', where labour input is expressed in annual work units (AWUs).

Animal output

Animal output comprises the sales, changes in stock levels, and the products used for processing and own final use by producers.

Annual work unit

One **annual work unit** corresponds to the work performed by one person who is occupied on an agricultural holding on a full-time basis. Full-time means the minimum hours required by the relevant national provisions governing contracts of employment. If the national provisions do not indicate the number of hours, then 1 800 hours are taken to be the minimum annual working hours: equivalent to 225 working days of eight hours each.

Aquaculture

Aquaculture, also known as **aquafarming**, refers to the farming of aquatic (freshwater or saltwater) organisms, such as fish, molluscs, crustaceans and plants for human use or consumption, under controlled conditions. Aquaculture implies some form of intervention in the natural rearing process to enhance production, including regular stocking, feeding and protection from predators. Farming also implies individual or corporate ownership of, or contractual rights to, the stock being cultivated.

Arable land

Arable land is land worked (ploughed or tilled) regularly, generally under a system of crop rotation.

Biodiversity

Biodiversity, a contraction of biological diversity, refers to the number, variety and variability of living organisms, including mankind, within a given area.

Biomass

Biomass is organic, non-fossil material of biological origin that can be used for heat production or electricity generation. It includes:

- wood and wood waste;
- biogas;
- municipal solid waste;
- biofuels.

Births

A **birth** is defined as the start of life when a child emerges from the body of its mother. The total number of births includes both live births and stillbirths.

The **crude birth rate** is the ratio of the number of births during the year to the average population in that year; the value is expressed per 1 000 inhabitants.

Bovine

A **bovine** refers to a domestic animal of the species *Bos taurus* (cattle) or *Bubalus bubalis* (water buffalo), and also includes hybrids like *Beefalo*.

A distinction can be made by the age of the animal (less than one year old, aged between one and two years, and two years and over), with a further division between male and female bovines.

Carbon dioxide equivalent

A **carbon dioxide equivalent** (or CO_2 equivalent) is a metric measure used to compare the emissions from various greenhouse gases on the basis of their **global warming potential (GWP)**, by converting amounts of other gases to the equivalent amount of carbon dioxide with the same global warming potential.

The carbon dioxide equivalent of a gas is derived by multiplying the tonnes of the gas by the associated GWP: million metric tonnes of a gas * GWP of the gas.

For example, the GWP for methane is 21. This means that one million metric tonnes of methane emissions is the equivalent of 21 million metric tonnes of carbon dioxide emissions.

Carcass weight

The definition of **carcass weight** depends on the animal species under consideration:

- for pigs, it is the weight of the slaughtered pig's cold body, either whole or divided in half along the mid-line, after being bled and eviscerated and after removal of the tongue, bristles, hooves, genitalia, flare fat, kidneys and diaphragm;
- for cattle, it is the weight of the slaughtered animal's cold body after being skinned, bled and eviscerated, and after removal of the external genitalia, the limbs, the head, the tail, the kidneys and kidney fats, and the udder;
- for sheep and goats, it is the weight of the slaughtered animal's cold body after having been bled, skinned and eviscerated, and after removal of the head, feet, tail and genital organs. Kidneys and kidney fats are included in the carcass weight;
- for poultry, it is the weight of the cold body of the slaughtered farmyard poultry after being bled, plucked and eviscerated; the weight includes poultry offal, with the exception of foie gras.

For other species, 'carcass weight' is considered to be the weight of the slaughtered animal's cold body.

Cattle

Cattle refer to domestic animals of the species *Bos taurus* (cattle) and *Bubalus bubalis* (water buffalo); together are called bovines.

Census

A **census** is a survey conducted on the full set of observation objects belonging to a given population or universe.

Cereals

Cereals include wheat (common wheat and spelt and durum wheat), rye, maslin, barley, oats, mixed grain other than maslin, grain maize, sorghum, triticale, and other cereal crops such as buckwheat, millet, canary seed and rice.

Climate change

Climate change refers to man-made (anthropogenic) climate change that is thought to be causing an increase in global temperatures driven by emissions of gases such as carbon dioxide and methane, known as greenhouse gases.

Common Agricultural Policy

The **Common Agricultural Policy** (CAP) is the EU's agricultural policy. CAP is an area in which competence is shared between the EU and its Member States. Under Article 33 of the Treaty establishing the European Community, its aims are to 'ensure reasonable prices for Europe's consumers and fair incomes for farmers, in particular through the common organisation of agricultural markets and by enforcing compliance with the principles adopted at the Stresa Conference in 1958, namely single prices, financial solidarity and Community preference'.

The CAP is one of the most important EU policies from a budget point of view: agricultural spending accounts for some 45 % of the EU budget. Qualified majority voting in the Council and consultation with the European Parliament decide policy. The CAP has fulfilled its main goal of food self-sufficiency in the EU. Major policy changes, however, proved necessary in order to correct imbalances and overproduction resulting from the CAP. Therefore, its aims have changed in the course of time, and the instruments used have also evolved as a result of successive reforms.

Common Fisheries Policy

The **Common Fisheries Policy** (CFP), is the EU's policy for managing fisheries in the waters of the EU Member States. Its objectives are:

- increasing productivity;
- stabilising markets;
- ensuring security of supply and reasonable prices to the consumer.

Although a Common Fisheries Policy was already provided for in the Treaty of Rome in 1957, it did not become a common policy in the full sense of the term until 1983. The CFP has the same

legal basis (Articles 32–38 of the EC Treaty) as the Common Agricultural Policy and shares the same aims mentioned above. Like the CAP, the CFP is a shared responsibility of the EU and its Member States. Successive reforms of the CFP have added new aims to its initial goals, namely:

- sustainable exploitation of resources;
- protection of the environment;
- safeguards for a high level of human health protection;
- contributing to economic and social cohesion.

Protection of fish stocks and the marine environment are key issues for the CFP given the threat posed by resource depletion.

Common land

Common land is the land that does not directly belong to any agricultural holding but on which common rights apply. It can consist of pasture, horticultural or other land.

Cover of storage facilities for manure

Cover of storage facilities for manure refers to the way a manure storage facility is covered (for example, concrete lid, tent, tarpaulin, and so on) in order to be protected from rain or other precipitation and be able to reduce ammonia emissions.

Cow

A **cow** is a female bovine that has calved (including any aged less than 2 years). A **dairy cow** is a cow kept exclusively or principally for the production of milk for human consumption and/or other dairy produce.

Crop output

Crop output comprises sales, changes in stock levels, and crop products used as animal feedstuffs, or for processing and own final use by the producers.

Crop rotation

Crop rotation on arable land is the practice of alternating annual crops grown on a specific field in a planned pattern or sequence in successive crop years so that crops of the same species are not grown without interruption on the same field. If the same crop is grown continuously, the term monoculture can be used to describe the phenomenon. The rotation of different species of cereals (for example, wheat, barley, oats or wheat) is also considered as crop rotation. Arable land is considered to be out of crop rotation when it is cultivated with the same crop for three years or more consecutively and when it is not part of a planned crop rotation.

Economically active population

The **economically active population**, or the active population, includes both employed and unemployed people, but not the economically inactive, such as pre-school children, school children, students and pensioners.

Employment rate

The **employment rate** is the proportion of employed persons in relation to the comparable total population. For the overall employment rate, the comparison is generally made in relation to the population of working-age; but employment rates can also be calculated for a particular age group and/or sex (for example, the male employment rate of those men aged 15–24).

Eutrophication

Eutrophication is a process by which a body of water acquires a high concentration of nutrients, especially phosphates and nitrates. It may occur naturally but can also be the result of human activity (fertiliser run-off, sewage discharge). These nutrients typically promote excessive growth of algae. As the algae die and decompose, high levels of organic matter and the decomposing organisms deplete the water of available oxygen, causing the death of other organisms, such as fish.

Family labour

The **family labour** force of the agricultural holding in the context of the farm structure survey (FSS) refers to persons who carry out farm work on the holding and are classified either as a holder or the members of the sole holder's family.

Farm labour force

The **farm labour force** of the holding includes all persons having completed their compulsory education (having reached school-leaving age) who carried out farm work on the holding during the 12 months ending on the reference day of the survey. All persons of retirement age who continue to work on the holding are included in the farm labour force.

Feed

Feed (**or feedingstuff**) is any substance or product, including additives, whether processed, partially processed or unprocessed, intended to be used for oral feeding to animals.

Fertiliser

A **fertiliser** is a substance used in agriculture to provide crops with vital nutrients to grow (such as nitrogen (N), phosphorus (P) and potassium (K)). Fertilisers can be divided into inorganic fertilisers

(also called mineral, synthetic or manufactured) and organic fertilisers. Organic fertilisers include manure, compost, sewage sludge and industrial waste.

Fishing area

Geographical **fishing areas** in the EU's Common Fisheries Policy are defined for a number of specific areas of water, including:

- the *North East Atlantic*, which is roughly the area to the east of 42°W longitude and north of 36°N latitude, including the waters of the Baltic Sea;
- the *North West Atlantic*, which is the region that is roughly the area to the west of 42°W longitude and north of 35°N latitude;
- the *Eastern Central Atlantic*, which is the region to the east of 40°W longitude between latitudes 36°N and 6°S;
- the *Mediterranean*, which is also known as the Food and Agriculture Organization Major Fishing Area 37, comprises the Mediterranean Sea and the adjacent Black Sea.

Fish catch

Fish catch (or simply **catch**) refers to catches of fishery products including fish, molluscs, crustaceans and other aquatic animals, residues and aquatic plants that are:

- taken for all purposes (commercial, industrial, recreational and subsistence);
- taken by all types and classes of fishing units (including fishermen, vessels, gear, and so on);
- operated in inland, fresh and brackish water areas, and in inshore, offshore and high-seas fishing areas.

The catch is normally expressed in live weight and derived by the application of conversion factors to the actual landed or product weight. As such, catch statistics exclude quantities of fishery products which are caught but which, for a variety of reasons, are not landed. Production from aquaculture is excluded from catch statistics.

Fishing fleet

The data on the number of fishing vessels, the **fishing fleet**, in general refer to the fleet size as recorded on 31 December of the specified reference year. The data are derived from the national registers of fishing vessels which are maintained according to Commission Regulation (EC) No 26/2004 which specifies the information on vessel characteristics to be recorded in the registers.

Forest

Forest is defined as land with tree crown cover (meaning all parts of the tree above ground level including its leaves, branches and so on), or equivalent stocking level, of more than 10 % and with an area of more than 0.5 hectares (ha). The trees should be able to reach a minimum height of five metres at maturity *in situ*.

Fossil fuel

Fossil fuel is a generic term for non-renewable natural energy sources such as coal, natural gas and oil that were formed from plants and animals (biomass) that existed in the geological past (for example, hundreds of millions of years ago). Fossil fuels are carbon-based and currently supply most human energy requirements.

Global warming potential

Global warming potential (GWP) is a term used to describe the relative potency of a greenhouse gas, taking account of how long it remains active in the atmosphere.

Goats

A goat is a domestic animal of the subspecies Capra *aegagrus hircus*.

Good agricultural and environmental conditions

Good agricultural and environmental conditions refer to a set of EU standards (described in Annex III of Council Regulation 73/2009) defined at national or regional level, aimed at promoting sustainable agriculture. Keeping land in good agricultural and environmental conditions is directly related to issues such as: soil erosion; soil organic matter; soil structure; minimum level of maintenance; protection and management of water, and; maintaining the total area of permanent pasture. These standards are to be respected by European farmers receiving direct payments or some rural development payments.

Grazed area

The **grazed area** is the total area of pastures owned, rented or otherwise allocated to the agricultural holding on which animals are kept for grazing during the reference year. The grazed area can also be harvested by mowing or other means. It includes all grasslands that are grazed, independent of whether they are temporary or permanent in nature. Permanent grasslands no longer used for production purposes are however excluded, as well as common lands not allotted to individual holdings.

Greenhouse gas

Greenhouse gases constitute a group of gases contributing to global warming and climate change. The Kyoto Protocol, an environmental agreement adopted by many of the parties to the United Nations Framework Convention on Climate Change (UNFCCC) in 1997 to curb global warming, covers six greenhouse gases:

- *the non-fluorinated gases*:
  - carbon dioxide (CO_2);
  - methane (CH_4);
  - nitrous oxide (N_2O).
- *the fluorinated gases*:
  - hydrofluorocarbons (HFCs);
  - perfluorocarbons (PFCs);
  - sulphur hexafluoride (SF_6).

Gross domestic product (GDP)

Gross domestic product (GDP) is a basic measure of a country's overall economic health. As an aggregate measure of production, GDP is equal to the sum of the gross value added of all resident institutional units (in other words, industries) engaged in production, plus any taxes, and minus any subsidies, on products not included in the value of their outputs. Gross value added is the difference between output and intermediate consumption.

Gross value added

Gross value added (GVA) is output at market prices minus intermediate consumption at purchaser prices; it is a balancing item of the national accounts' production account:

- **GVA at producer prices** is output at producer prices minus intermediate consumption at purchaser prices — the producer price is the amount receivable by the producer from the purchaser for a unit of a product minus value added tax (VAT), or similar deductible tax, invoiced to the purchaser.
- **GVA at basic prices** is output at basic prices minus intermediate consumption at purchaser prices — the basic price is the amount receivable by the producer from the purchaser for a unit of a product minus any tax on the product plus any subsidy on the product.

GVA at factor cost is not a concept explicitly used in national accounts. It can be derived by subtracting other taxes on production from GVA at basic prices and adding other subsidies on production.

Joint forest sector questionnaire

The **joint forest sector questionnaire** (**JFSQ**) is an initiative of the International Tropical Timber Organisation (ITTO), the United Nations Economic Commission for Europe (UNECE), the Food and Agriculture Organisation of the United Nations (FAO) and Eurostat to collect statistics on the world timber situation. Each agency collects data from the countries for which it is responsible, with Eurostat compiling information from the EU Member States and EFTA countries.

Kitchen gardens

Kitchen gardens are areas of an agricultural holding devoted to the cultivation of agricultural products not intended for selling but for consumption by the farm holder and his household.

Land use

Land use refers to the socioeconomic purpose of the land. Areas of land can be used for residential, industrial, agricultural, forestry, recreational, transport purposes and so on.

Life expectancy

Life expectancy at birth is the mean number of years a newborn child can expect to live if subjected throughout his or her life to the current mortality conditions, the probabilities of dying at each age (age-specific probabilities of dying, in other words, the death rates observed for the current period).

Liquid manure

Liquid manure is urine from domestic animals including possibly a small amount of excrement and/or water.

Live weight of fishery products

Live weight of fishery products is derived from the landed or product weight by the application of certain factors and is designed to represent the actual weight of the fishery product as it was taken from the water and before being subjected to any processing or other operations.

Livestock density index

The **livestock density index** measures the stock of animals per hectare. It is the ratio of the number of livestock units (LSUs) (converted from the number of animals using standard coefficients) per hectare of utilised agricultural area (UAA). The livestock density index is an indicator that helps analyse the pressure of livestock farming on the environment.

Livestock, through manure production, contributes to climate change (greenhouse gas emissions) and nutrient leaching into

water and air. A higher livestock density means that a higher amount of manure is available per hectare of agricultural area, which increases the risk of emissions and nutrient leaching. The actual impact on the environment of livestock farming depends not only on the amount of livestock, but also the farming practices employed on each farm. An increase in the livestock index, therefore, does not necessarily imply environmental degradation.

Livestock-specialist holding

A **livestock-specialist holding** is an agricultural holding where livestock production is the dominant activity, providing at least two thirds of the production or the business size of an agricultural holding.

Livestock survey

The **livestock survey** provides information about the livestock population in the EU, as well as information at a national and regional level — it is more detailed than the farm structure survey (FSS), using more animal categories in its classification of livestock. It is conducted once a year, in December, in all of the EU Member States.

Livestock unit

The **livestock unit** is a reference unit which facilitates the aggregation of livestock from various species and age as per convention, via the use of specific coefficients established initially on the basis of the nutritional or feed requirement of each type of animal. The reference unit used for the calculation of livestock units (=1 LSU) is the grazing equivalent of one adult dairy cow producing 3 000 kg of milk annually, without additional concentrated foodstuffs.

Meat production

Meat production refers to the slaughter, in slaughterhouses and farms, of animals whose carcass weight is declared fit for human consumption; the definition applies to animals such as cows, pigs, sheep and goats.

Members of the sole holder's family

The **members of the sole holder's family** in the context of the farm structure survey (FSS) are the spouse, relatives and brothers and sisters of the holder or his/her spouse, which carry out farm work on the holding; they do not need necessarily live on the holding. Other relatives (for example, cousins being engaged in the farm work) could also be included if they are living and working on the farm with the family of the agricultural holder.

Milk

Farms produce **milk** for two distinct purposes: to distribute to dairies as well as for domestic consumption, direct sale and cattle feed.

Mixed-farming holding

A **mixed-farming holding** is an agricultural holding where neither livestock nor crop production is the dominant activity; an activity is called dominant if it provides at least two thirds of the production or the business size of an agricultural holding.

Non-family labour

The **non-family labour** force of the agricultural holding in the context of the farm structure survey (FSS) refers to persons directly employed by the holding. They can be classified as:

- non-family labour regularly employed — all persons other than the holder and members of his family doing farm work and receiving any kind of remuneration (salary, wages, profits or other payments including payment in kind) from the agricultural holding;
- non-family labour employed on a non-regular basis — all persons other than the holder and members of his family doing farm work and receiving any kind of remuneration from the agricultural holding who did not work each week on the agricultural holding in the 12 months ending on the reference day of the survey; this category usually covers seasonal workers.

Not directly employed labour

Farm labour force not directly employed by the holding in the context of the farm structure survey (FSS) refers to the persons who are not directly employed by the agricultural holding, but are self-employed or employed by third parties, for example, contractors or cooperatives.

Old-age-dependency ratio

The **old-age-dependency ratio** is the ratio of the number of elderly people at an age when they are generally economically inactive (in other words, aged 65 and over), compared with the number of people of working age (in other words, 15–64 years old).

Permanent crops

Permanent crops are tree/shrub crops not grown in rotation, but occupying the soil and yielding harvests for several (usually more than five) consecutive years. Permanent crops mainly consist of fruit and berry trees, bushes, vines and olive trees.

Permanent grassland and meadow

Permanent grassland and meadow is land used permanently (for several — usually more than five — consecutive years) to grow herbaceous forage crops, through cultivation (sown) or naturally (self-seeded); it is not, therefore, included in the crop rotation scheme on the agricultural holding. Permanent grassland and meadow can be either used for grazing by livestock, or mowed for hay or silage (stocking in a silo).

Pig

A **pig** is a domesticated animal of the species *Sus*. A distinction is made between pigs, piglets, fattening pigs and breeding pigs.

Population change

Population change, defined generally, is the difference in the size of a population between the end and the beginning of a given time period (usually one year). Specifically, it is the difference in population size on 1 January of two consecutive years.

The **crude rate of population growth** is the ratio of total population growth during the year to the average population of the area in question that year; the value is expressed per 1 000 inhabitants.

Poultry

Poultry refers to domestic birds of the following species: *Gallus gallus* (hens and chickens); *Meleagris spp.* (turkeys); *Anas spp. and Cairina moschata* (ducks); *Anser anser dom.* (geese); *Coturnix spp.* (quail); *Phasianus spp.* (pheasants); *Numida meleagris dom.* (guineafowl); *Columbinae spp.* (pigeons); *Struthio camelus* (ostriches). It excludes, however, birds raised in confinement for hunting purposes and not for meat production.

Producer price

The **producer price** is the amount receivable by the producer from the purchaser for a unit of a good or service produced as output minus any value added tax (VAT), or similar deductible tax, invoiced to the purchaser. It excludes any transport charges invoiced separately by the producer.

Regularly employed labour

The **regularly employed labour** force of the agricultural holding in the context of the farm structure survey (FSS) refers to directly employed persons who carried out farm work every week on the holding during the 12 months ending on the reference day of the survey, irrespective of length of the working week. The regularly employed labour force may be classified either as a family labour or the non-family labour regularly employed.

Roundwood production

Roundwood production (the term is also used as a synonym for removals in the context of forestry) comprises all quantities of wood removed from the forest and other wooded land, or other tree felling site during a defined period of time.

Sawnwood

Sawnwood is wood that has been produced either by sawing lengthways or by a profile-chipping process and, with a few exceptions, is greater than 6 millimetres (mm) in thickness.

Sheep

Sheep are domesticated animals of the species *Ovis aries* kept in flocks mainly for their wool or meat.

Slaughterhouse

A **slaughterhouse** is an officially registered and approved establishment used for slaughtering and dressing animals whose meat is intended for human consumption.

Slaughtering and meat production

Data on **slaughtering and meat production** are collected on a monthly basis. They refer to the activity of slaughterhouses, while the share of domestic slaughtering (in other words, outside officially recognised slaughterhouses) is explicitly left out of the statistics in order to improve comparability of the results across EU Member States.

Slurry

Slurry is manure in liquid form, that is to say a mixture of excrements and urine of domestic animals, including possibly also water and/or a small amount of litter.

Solid dung

Solid dung, including farmyard manure, is excrement, with or without litter, of domestic animals including possibly a small amount of urine.

Standard output

The **standard output** of an agricultural product (crop or livestock) is the average monetary value of the agricultural output at farm-gate price, in euro per hectare or per head of livestock. A regional coefficient for each product is applied, as an average value over a reference period (five years). The sum of all the standard outputs per hectare of crop and per head of livestock for a farm is a measure of its overall economic size, expressed in euro.

Unemployment

An **unemployed** person is defined by Eurostat, according to the guidelines of the International Labour Organisation, as:

- someone aged 15–74 (in Italy, Spain, the United Kingdom, Iceland, Norway: 16–74 years);
- without work during the reference week;
- available to start work within the next two weeks (or has already found a job to start within the next three months);
- actively having sought employment at some time during the last four weeks.

The **unemployment rate** is the number of people unemployed as a percentage of the labour force.

Utilised agricultural area

The **utilised agricultural area** (UAA) describes the area used for farming. It includes the land categories: arable land; permanent grassland; permanent crops, and; other agricultural land such as kitchen gardens (even if they only represent small share of the total UAA). The term does not include unused agricultural land, woodland and land occupied by buildings, farmyards, tracks, ponds, and so on.

Waste

Waste means any substance or object which the holder disposes of or is required to dispose of pursuant to the provisions of national law in force. **Disposal** of waste means:

- the collection, sorting, transport and treatment of waste as well as its storage and tipping above or underground;
- the transformation operations necessary for its re-use, recovery or recycling.

Abbreviations

Geographical aggregates and country codes

EU-28	European Union of 28 Member States
EU-27	European Union of 27 Member States
EU-15	European Union of 15 Member States
EU	European Union
BE	Belgium
BG	Bulgaria
CZ	Czech Republic
DK	Denmark
DE	Germany
EE	Estonia
IE	Ireland
EL	Greece
ES	Spain
FR	France
HR	Croatia
IT	Italy
CY	Cyprus
LV	Latvia
LT	Lithuania
LU	Luxembourg
HU	Hungary
MT	Malta
NL	Netherlands
AT	Austria
PL	Poland
PT	Portugal
RO	Romania
SI	Slovenia
SK	Slovakia
FI	Finland
SE	Sweden
UK	United Kingdom
IS	Iceland
LI	Liechtenstein
NO	Norway
CH	Switzerland

ME	Montenegro
MK ([1])	the former Yugoslav Republic of Macedonia
RS	Serbia
TR	Turkey

In this publication, the geographical descriptions and the use of the terms 'southern', 'central', 'eastern' and 'western' Europe are not meant as political categorisations. The references in the text are made in relation to the geographical location of one group of Member States of the European Union in comparison to another group of Member States.

Units of measurement

%	per cent
AWU	annual work unit
EUR	euro
LSU	livestock unit
kg	kilogram
km^2	square kilometre
kW	kilowatt
m^3	cubic metre
toe	tonne of oil equivalent

([1]) Provisional ISO code which does not prejudge in any way the definitive nomenclature for this country, which is to be agreed following the conclusion of negotiations currently taking place on this subject at the United Nations.

Other abbreviations

AEI	agri-environmental indicators
CAP	Common Agricultural Policy
CFP	Common Fisheries Policy
CH_4	methane
CO_2	carbon dioxide
COM	Communication
CMO	Common Market Organisation
EAA	economic accounts for agriculture
EC	1.European Community 2. European Commission
EEA	European Environment Agency
EEC	European Economic Community
EFTA	European Free Trade Association
EU	European Union
Eurostat	statistical office of the European Union
FLEGT	forest law enforcement, governance and trade
FSS	farm structure survey
GAEC	good agricultural and environmental condition
GDP	gross domestic product
HICP	harmonised index of consumer prices
IPPC	integrated pollution prevention and control
LRTAP	long-range transboundary air pollutants
LULUCF	land-use, land change and forestry
NEC	national emissions ceiling
NH_3	ammonia
NH_4	ammonium
NO_3	nitrate
N_2	nitrogen
N_2O	nitrous oxide
NUTS	classification of territorial units for statistics (NUTS levels 1, 2 and 3)
SAPM	survey on agricultural production methods
UAA	utilised agricultural area
UNECE	United Nations Economic Commission for Europe
UNFCCC	United Nations Framework Convention on Climate Change

European Commission

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